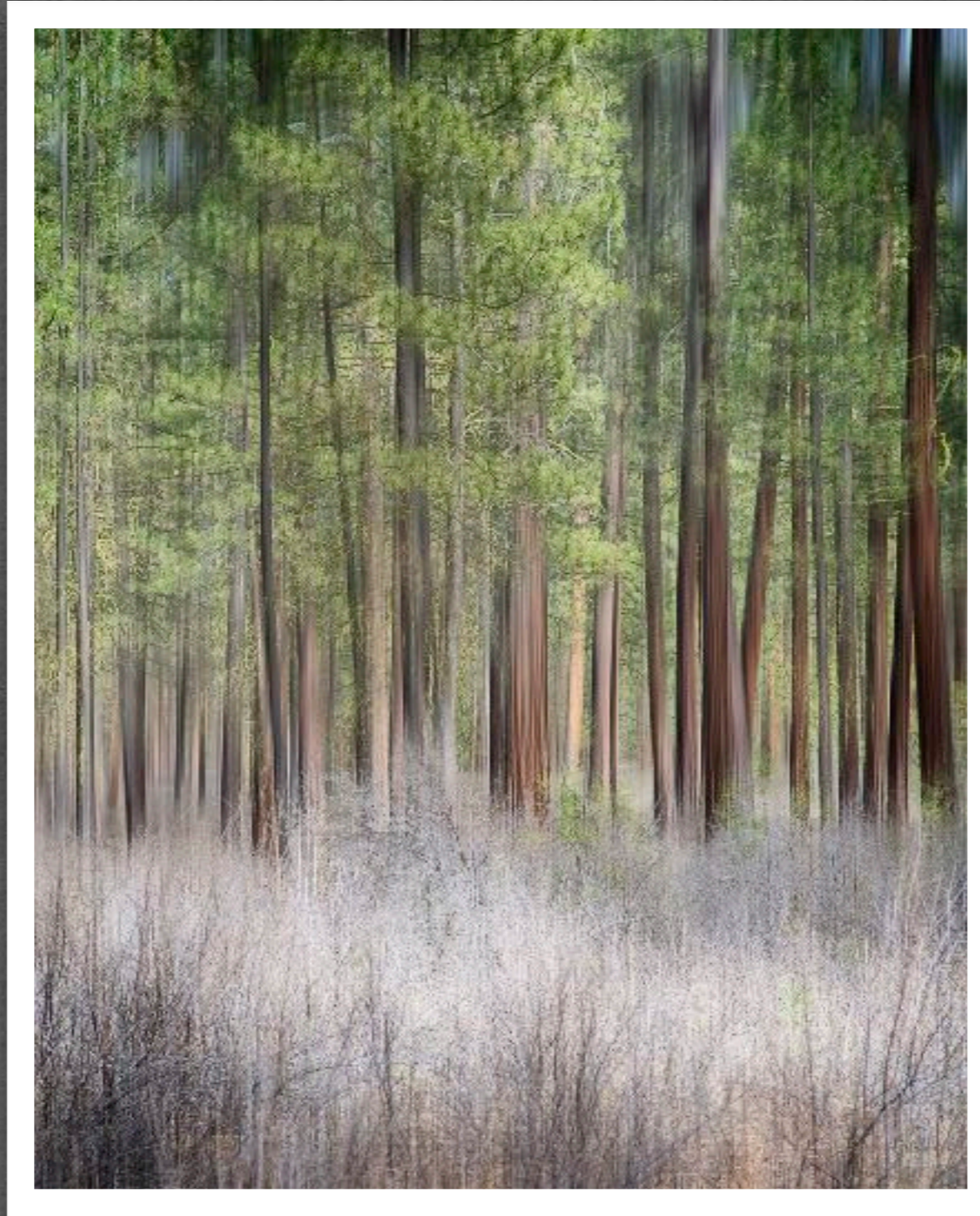


# Photoshop Smart Objects



**DISCOVER THE LIGHT**  

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**PHOTOGRAPHY**

# Introduction to Smart Objects

# What are Smart Objects?

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- Containers that store many things (i.e., raw image data, smart filters, other smart objects).
- Allows non destructive use of transformations, scale, warp, liquify, and much more.
- Filters and adjustments become smart filters and adjustments (i.e., you can edit them after creation).
- Allows you to avoid merging and flattening layers.
- Allows the use of Raw image adjustments (Adobe Camera Raw).
- Can combine Camera Raw adjustment tools with selections and masks.
- Can make Lab adjustments within RGB images.
- Allows more control over split toning, exposure blending, and much more.

# Disadvantages

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- Slower read and write times.
- Larger file sizes.  
**NOTE:** Saving as TIFF vs. PSD results in somewhat smaller files.
- Can't change pixels directly on smart object layers (clone, heal, paint, dodge, burn, auto alignments).

# Ways to Create Smart Objects

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- ➔ Convert an existing layer in Photoshop to a Smart Object.
- ➔ Send an image in Lightroom to Photoshop as a Smart Object.
- ➔ Open an image file in Photoshop as a Smart Object.
- ➔ Place an embedded or linked Smart Object in Photoshop.

# Types of Smart Objects

# Converted vs. Opened Smart Objects

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## I. Converted Smart Objects:

- A non-smart object in Photoshop is converted to a smart object.
- Opening the smart object opens in a separate (linked) document (i.e., separate tab).
- Saving changes in the opened document, saves the changes back to the original Smart Object.

## II. Opened Smart Objects:

- A smart object opened in Photoshop or sent to Photoshop from Lightroom as a smart object.
- Opening the smart object opens Adobe Camera Raw in Photoshop depending on file type:
  - ➔ **RAW** - opens Camera Raw with the same adjustments from Lightroom
  - ➔ **TIFF** - opens Camera Raw without the adjustments from Lightroom
  - ➔ **JPEG** - opens Camera Raw without the adjustments from Lightroom
  - ➔ **PSD** - opens Camera Raw as separate document

# Duplicated vs. Copied Smart Objects

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- **Duplicated** (*Layer > Duplicate Layer*):  
Links the duplicated smart object to the original smart object (changes to either layer are applied to both).
- **Copied** (*Layer > Smart Objects > New Smart Object via Copy*):  
Copied smart object is an independent smart object (changes to one layer do not affect the other). Great for blending single images.



# Embedded vs. Linked Smart Objects

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- Used mostly by publishers and graphic designers who use multiple images, watermarks, or logos.
- Can also be used for photographer's logos and watermarks.
- **Embedded** (*File > Place Embedded*):  
Contents saved in the layer. Changes are independent and only for the file they are contained in.
- **Linked** (*File > Place Linked*):  
Contents are linked to the parent document. Changes are linked to all other linked smart objects in other files.
- Embedded can be changed to Linked and visa versa.

# Demos

- Smart Transformations
- Smart Filters - Smart vs. Non-Smart
- Smart Filters - High Pass Sharpening
- Smart Filters - Gaussian Blur
- Smart Blending - Two Exposures
- Smart Blending - Single Exposure
- Smart Noise Reduction

# Smart Transformations

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1. Use '20120302 Tygh Valley/\_MG\_8119'
  2. Send to PS (non-smart).
  3. Copy BG layer twice.
  4. Rename top layer Non-smart and middle layer Smart.
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5. Non-smart layer
  6. Edit > Free transform (cmd+T).
  7. Warp mode.
  8. Straighten head stone.
  9. Commit to change.
  10. Hide non smart layer and go to smart layer.
  11. Free transform > warp mode.
  12. Straighten head stone.
  13. Commit to change.
  14. Go back to non smart layer.
  15. Free transform > warp mode.
  16. Reset the Warp button has no effect.
  17. Hide non smart layer.
  18. Go back to smart layer.
  19. Free transform > warp mode.
  20. Undo changes with Reset the Warp button.
  21. Save & Close

# Smart Transformations

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1. Use 79P1482 (red barn)
  2. Send to PS (non-smart).
  3. Copy BG layer twice.
  4. Rename top layer Non-smart and middle layer Smart.
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5. Non-smart layer
  6. Edit > Free transform (cmd+T).
  7. Warp mode.
  8. Pull lower left right, bottom left right (to straighten left side).
  9. Pull right bottom too far left.
  10. Commit to change.
  11. Hide non smart layer and go to smart layer.
  12. Convert layer to smart object.
  13. Free transform > warp mode.
  14. Same warps as non-smart layer.
  15. Commit to change.
  16. Go back to non smart layer.
  17. Free transform > warp mode.
  18. Previous warps are gone and Reset the Warp button has no effect.
  19. Hide non smart layer.
  20. Go back to smart layer.
  21. Free transform > warp mode.
  22. Warp edits are still there and Reset the Warp button works.
  23. Save & Close

# Smart Filters - Smart vs. Non-Smart

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1. Use '20121104 Spirit Falls/79P3655'
  2. Send to PS as non-smart object.
  3. Duplicate BG layer twice.
  4. Rename top layer "non smart blur".
  5. Rename middle layer "smart blur".
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6. Apply Gaussian blur 20px to non-smart layer.
  7. Apply white mask and paint 100% black over waterfall the yellow trees.
  8. Hide layer.
  9. Convert smart blur layer to Smart object.
  10. Apply Gaussian blur 20px.
  11. Copy mask from non-smart blur layer.
  12. Go to properties of Gaussian blur in SO and lower the blur to 10-15px.
  13. Go to sliders for Gaussian blur filter and note opacity its and blending options (change to Lighten BM).
  14. Hide layer.
  15. Go to Non-smart layer and note that there are no properties to edit. Can only add more blur on top of exciting blur.
  16. Save & Close

# Smart Filters - High Pass Sharpening

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1. Use '20121104 Spirit Falls/79P3646'
  2. Send to PS as SO.
  3. Copy layer and name "Sharpen".
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4. Filter > Other > High Pass (20px).
  5. Without smart filters, there would be only the pixel layer and a blend mode would have to be applied to it. With smart filters, the blend mode can be applied to the filter.
  6. Change blend mode on smart filter to Soft Light (double click arrow slider icon to right of High Pass layer).
  7. Invert white smart filter mask (turns to black mask)
  8. Paint 100% white where sharpening is desired.
  9. Adjust high pass level (double click High Pass layer text).

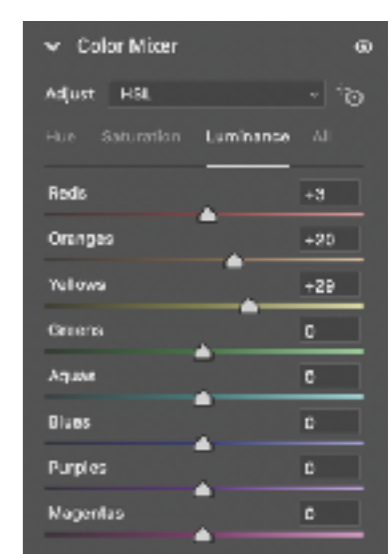
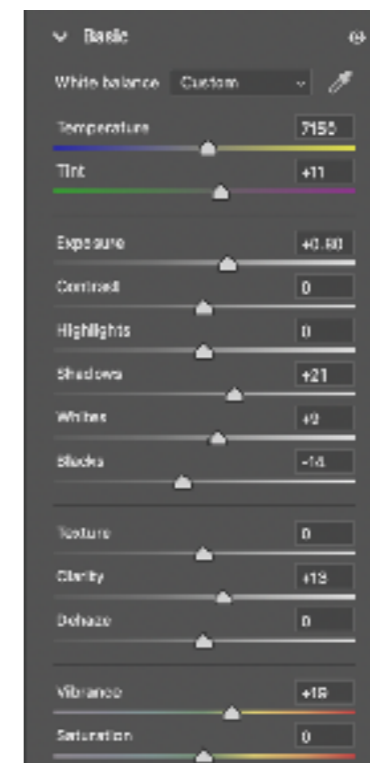
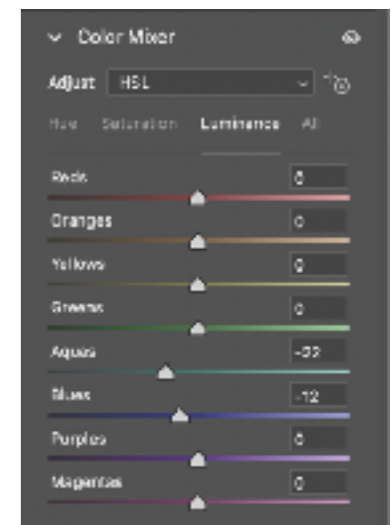
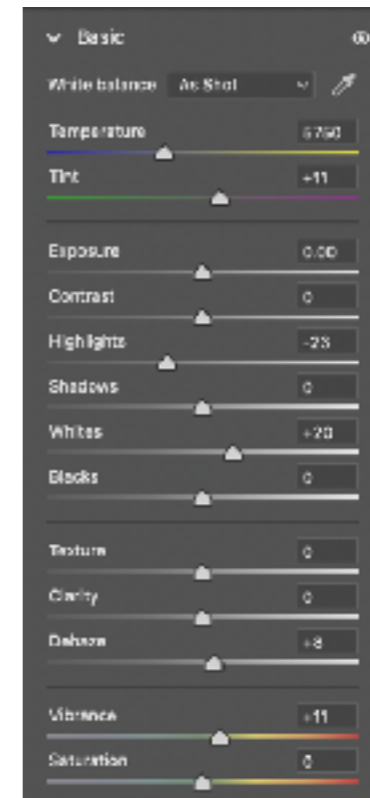
# Smart Filters - Gaussian Blur

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1. Continue with '20121104 Spirit Falls/79P3646'
2. Copy BG layer, move to top, and name "Blur".
3. Apply Gaussian blur (10px).
4. Apply white mask to pixel layer and paint 100% black where blur is not wanted.
5. Adjust blur level (double click layer).
6. Mask applied to Blur layer allows sharpening below to show through. If mask was applied to Sharpen layer instead of smart filter, pixels in this layer would be controlled by the mask instead of the filter.
7. Save & Close

# Smart Blending - Single Exposure

1. Use 79P2936.
2. Send to PS as SO.
3. Copy SO layer, rename top layer sky and bottom layer land.
4. Quick selection tool - select sky and save.
5. Add mask to sky layer (note how selection creates white/black mask).
6. ACR for sky layer (Basic, reduce sharpening, HSL).
7. ACR for land layer (Basic, sharpen, HSL).
8. Save & Close





# Smart Noise Reduction

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1. Use 79P2242.
  2. Show sharpening and NR in Detail panel (no NR but sharpening added).
  3. Send to PS as SO.
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4. Copy layer (note difference between duplicate and copy).
  5. Rename layer to noise reduction.
  6. Open ACR on NR layer.
  7. Reduce sharpening and add luminance and color NR, reduce detail NR sliders.
  8. Zoom in over sky and turn NR layer on and off noting how noise is reduced and sharpness is too.
  9. Create Darks 2 LM, modify levels and expand.
  10. Apply to NR layer.
  11. Zoom in and turn NR layer on and off noting how noise is reduced in dark area and sharpness is retained elsewhere.
  12. Save & Close



# Smart Blending - Two Exposures

1. Use DSC2565 and DSC2566.
2. Send to PS as SOs.
3. Run TK > Stack action.
4. Make sure darker layer is on top.
5. Rename top layer Sky and bottom Land.
6. Check alignment (zoom in and use Difference BM).
7. Use the Move tool with arrow keys to align.
8. Use Quick Selection to select sky.
9. Use rectangle tool to subtract near water.
10. Save selection.
11. Apply sky selection to top layer (use TK Apply layer button).
12. ACR on land layer to darken.
13. Use adjustment brush on foreground to bring out details.
14. Use adjustment brush on water to darken (-50 highlights).
15. ACR on sky layer to lighten.
16. Adjust Land again.
17. Blue channel, lights 2, mod w/ levels and black brush, output as Curves.
18. Add Hue/Sat layer, delete mask, copy Curves mask, blue channel desat, Layer mask mode and expand and use levels.

