

Sharpening As Told By A Novice

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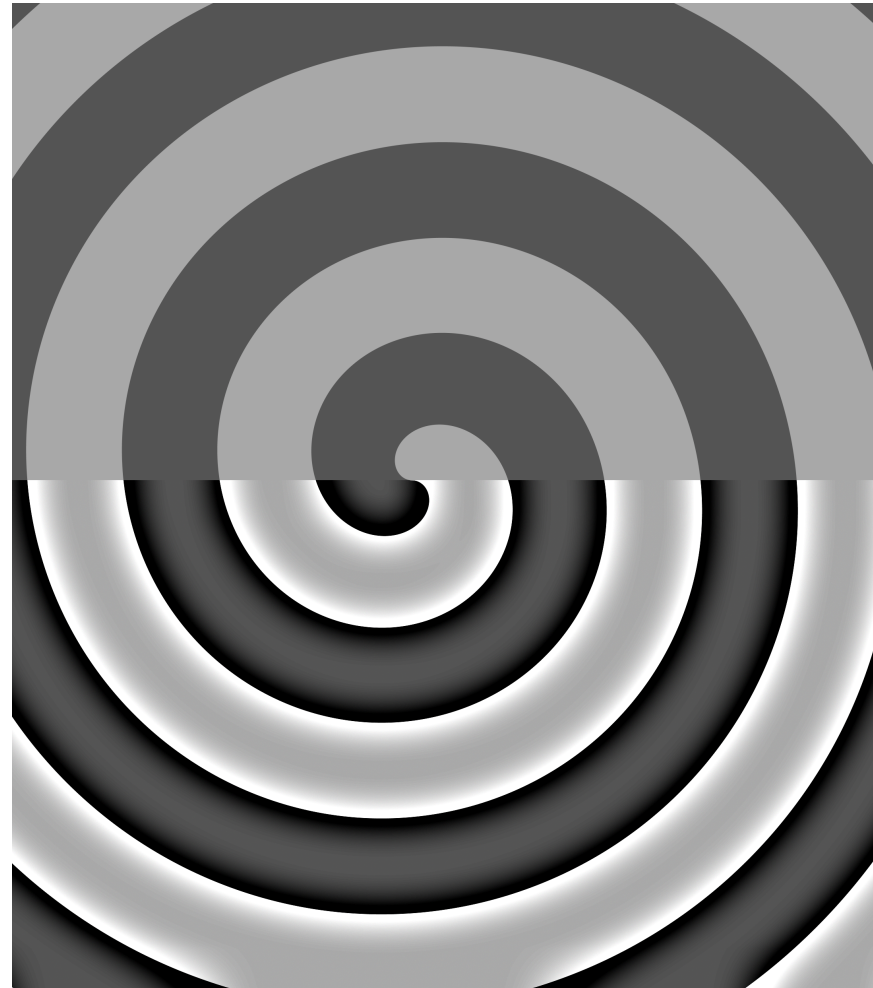
Sharpening – Is the bottom “sharper” than the top?

Sharpening:

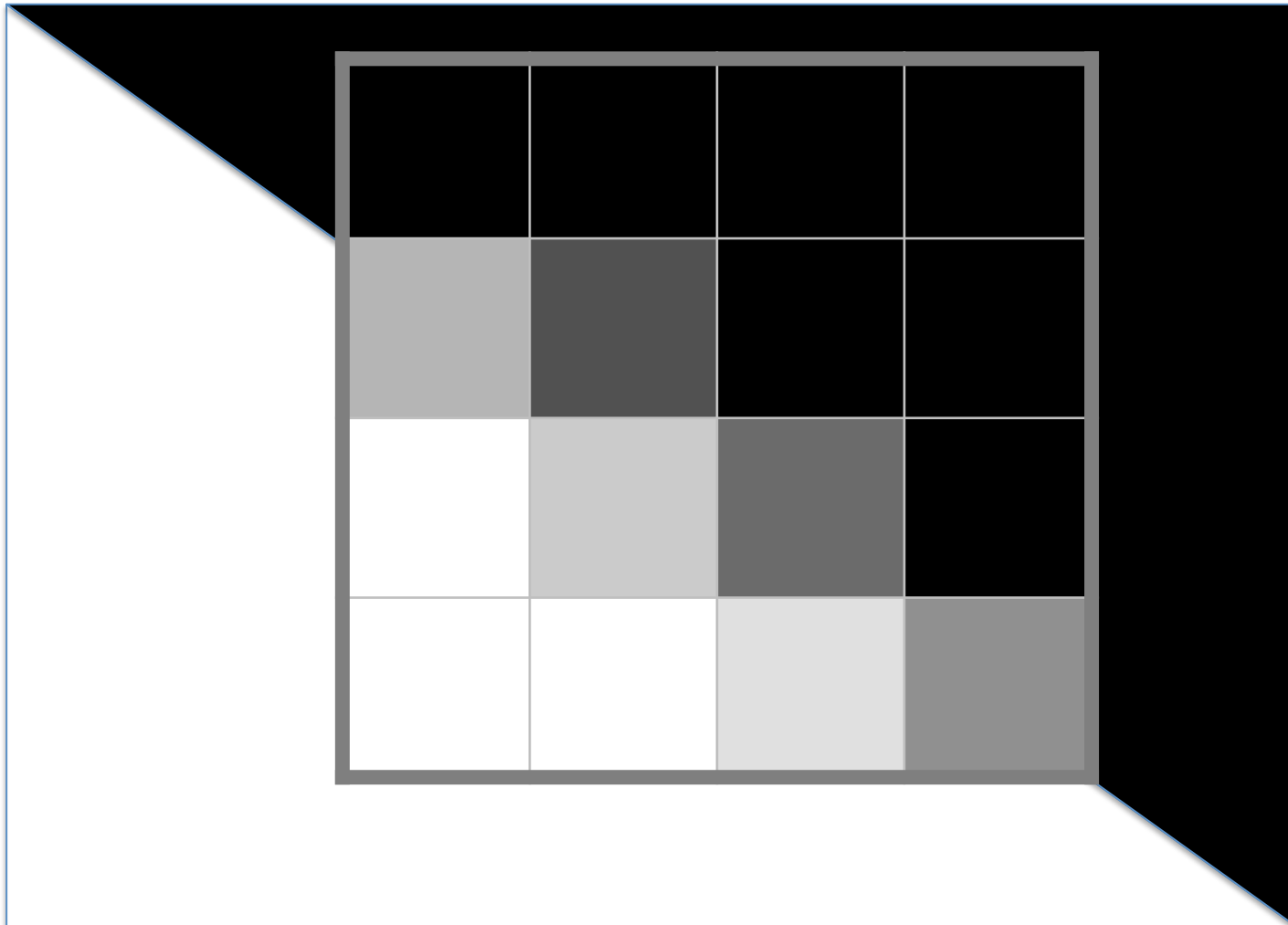
- Can't make a blurry image sharp
- Fools the eye/brain into “seeing” sharper edges
- Can introduce undesirable artifacts if overused

Three categories of sharpening:

- Capture sharpening – restore (or enhance) the appearance of original sharpness
- Local or “creative” sharpening – same as above, but applied locally for creative emphasis
- Output sharpening – compensate for degradation when printed or displayed



Capture “Blurring”



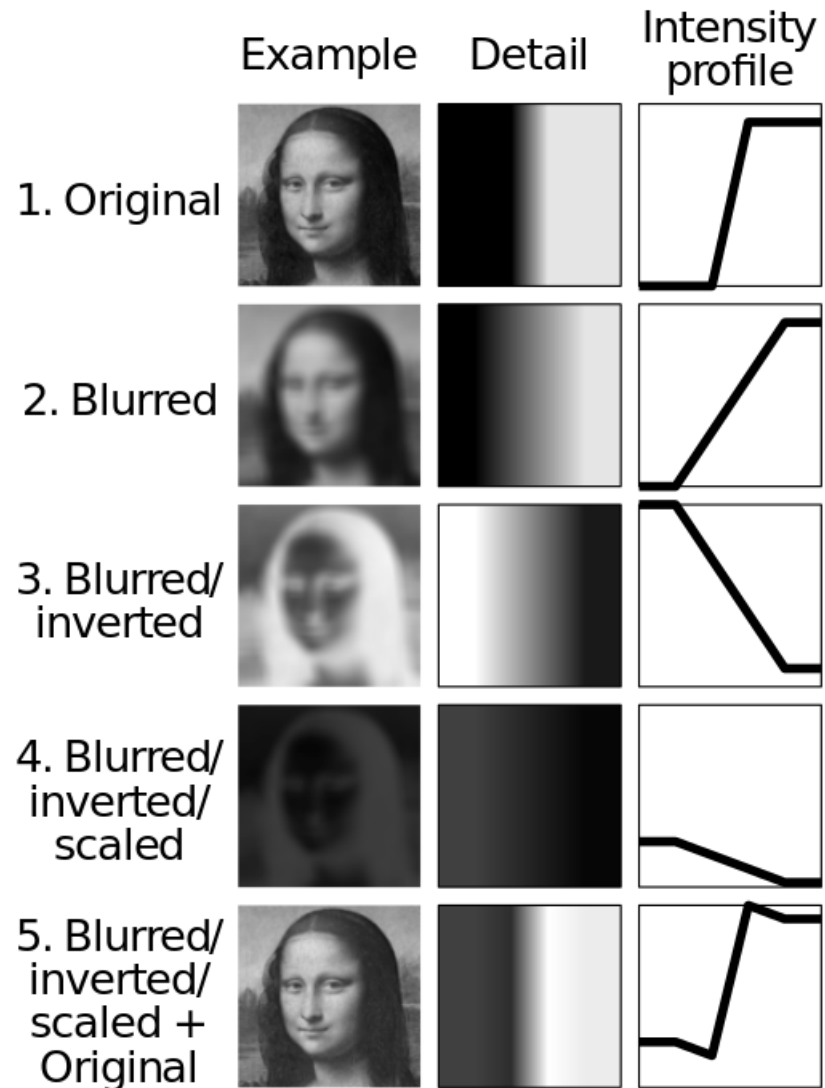
Unsharp Masking – one example of sharpening

Concept:

- Apply a Gaussian blur to the original
- Invert the blurred image
- Scale to produce the desired “amount” of sharpening
- Add the original and the blurred/inverted/scaled images

Result:

- Edges that are a bit darker on the dark side, and a bit lighter on the light side



Sharpening Using a High-Pass Filter

Concept:

- Apply a filter that only keeps the “high spatial frequency” information – just the localized changes in brightness (edges)
- Combine the filtered image with the original image to enhance the edges

Practice:

- In Photoshop and other tools, “combine” means one of several “layer modes,” such as overlay, linear light, or vivid light.

