

Using Adobe Photoshop to Create Digital Cartoons or Caricatures (Second File)

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Part One:

Basic Sets of Photoshop Tools and Settings Used to Create Cartoon and Caricature-Style Images

Section Four:

Using Filter-Distort Tools to Change Normal Digital Images into Caricature or Cartoons

The Distort filters available from the Filters menu, geometrically distort an image, creating three-dimensional or other reshaping effects. For the purposes of converting normal photographic images in cartoon or caricature-looking images, the Glass, Ocean Ripple and Ripple filters could be used to create reflected image in waterscape, the Pinch, Shear and Spherize tools could be used to distort the overall shapes of the images while maintaining the semblance of its original contents; and the Twirl and Zigzag filters could be used to totally decompose the original visual elements into pure geometric shapes. The following quotations, copied from an online article titled *Distort Filters* in the Adobe Photoshop CS5 website at http://help.adobe.com/en_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-796ba.html, explain the general capabilities of the respective tools:

- “Glass makes an image appear as if it were being viewed through different types of glass. You can choose a glass effect or create your own glass surface as a Photoshop file and apply it. You can adjust scaling, distortion, and smoothness settings.”
- “Ocean Ripple adds randomly spaced ripples to the surface of the image so that it appears to be underwater.”
- “Pinch squeezes a selection. A positive value up to 100% shifts a selection toward its center; a negative value up to –100% shifts a selection outward.”
- “Ripple creates an undulating pattern on a selection, like ripples on the surface of a pond. For greater control, use the Wave filter. Options include the number and size of ripples.”
- “Shear distorts an image along a curve. Specify the curve by dragging the line in the box. You can adjust any point along the curve. Click Default to change the curve back to a straight line. In addition, you choose how to treat undistorted areas.”
- “Spherize gives objects a 3D effect by wrapping a selection around a spherical shape, distorting the image and stretching it to fit the selected curve.”
- “Twirl rotates a selection more sharply in the center than at the edges. Specifying an angle produces a twirl pattern.”
- “ZigZag distorts a selection radially, depending on the radius of the pixels in your selection. The Ridges option sets the number of direction reversals of the zigzag from the center of the selection to its edge. You also specify how to displace the pixels: Pond Ripples displaces pixels to the upper-left or lower right, Out From Center displaces pixels toward or away from the center of the selection, and Around Center rotates pixels around the center.”

Using the Twirl Tool to create winding patterns

Winding patterns are sometimes seen in the eyes of cartoon animal or human heads. In Photoshop, similar patterns could be created out of normal photographic image of human or animal eyes. The steps are illustrated in *Figure 11A* and *Figure 11B*; and explained as follows:

1. Select the intended portion of the image with the Rectangular Marquee or Circular Marquee Tool,
2. Select the Twirl Tool from the Distort submenu of the Filter menu,
3. In the Twirl tool window, move the slider beneath the Angle bar to obtain the desired effect,
4. Click the OK button to apply the twirling effect.

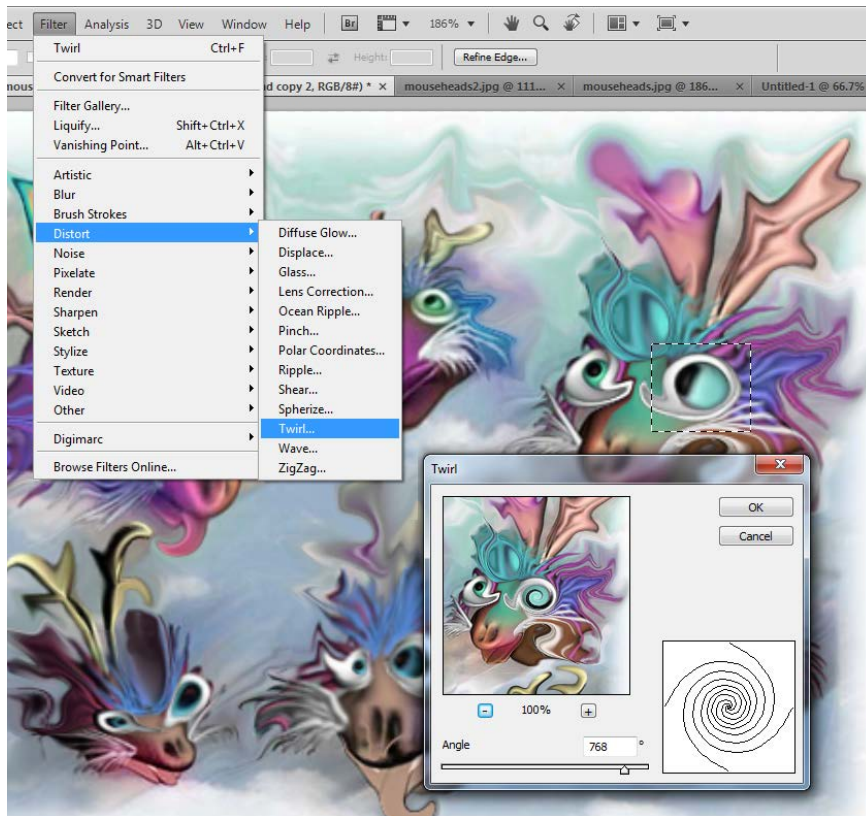


Figure 11B. Clicking the OK button to apply the desired outcome of the twirling operation.

Figure 11A. Selecting the portion of the image around the right eye with the Rectangular (or Circular) Marquee Tool; selecting the Twirl Tool from the Distort submenu of the Filter menu, moving the slider beneath the Angle bar to obtain the desired effect.

Using the Ripple, Ocean Ripple, and Glass Tools to create water scenes

The Ripple, Ocean Ripple and Tools, all available from the Distort submenu of the Filter menu, could be used to change normal pictures into sceneries of rippling water or waves, or to add reflected image of humans, animals, trees and other objects in water bodies, in collage with a normal image of waterscape. The steps for using the Ripple tool are illustrated in *Figure 12A*. The steps for using the Ripple tool are illustrated in *Figure 12B* and *Figure 12C*. The steps for using the Glass Tool to create water reflection effects are illustrated in *Figures 12D* through *12F*.

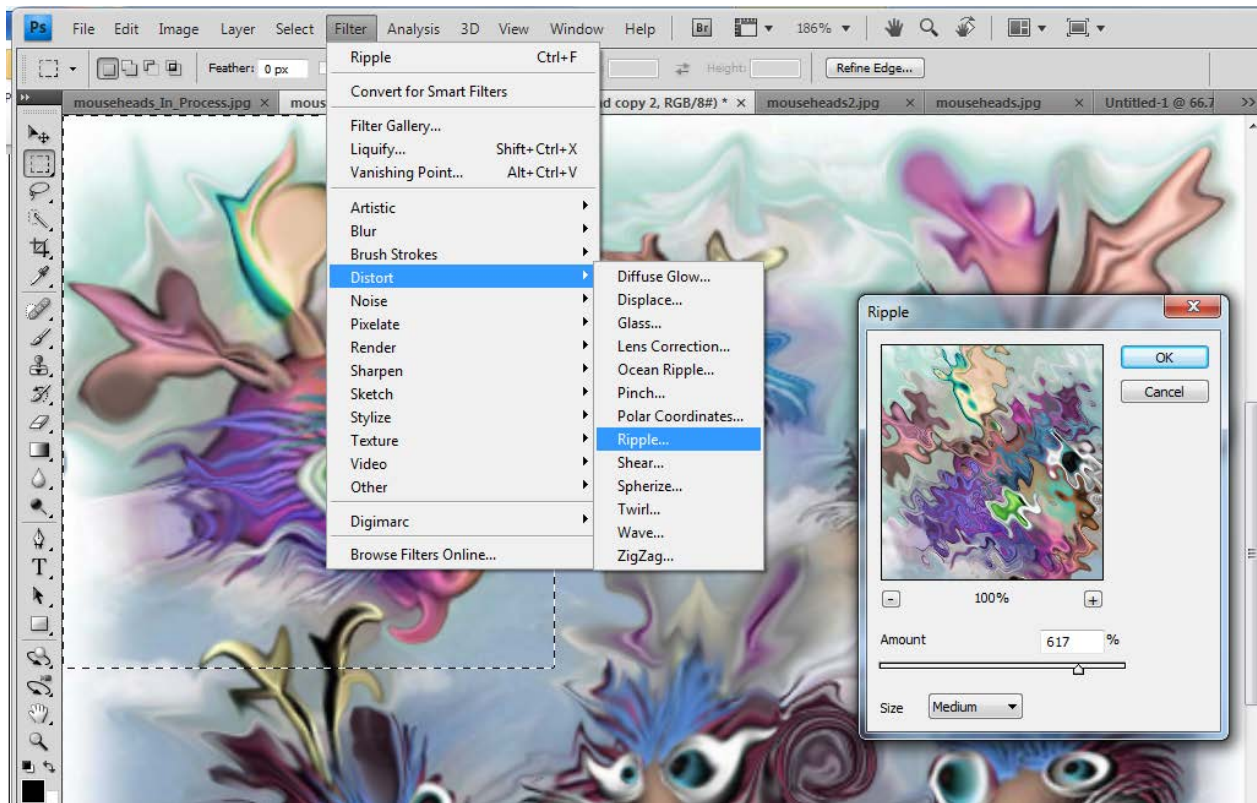


Figure 12A. Selecting the Ripple Tool from the Distort submenu of the Filter menu; adjusting the Amount in the Ripple tool window until the desired effect is seen in the previous window, and clicking the OK button to apply the desired effects.

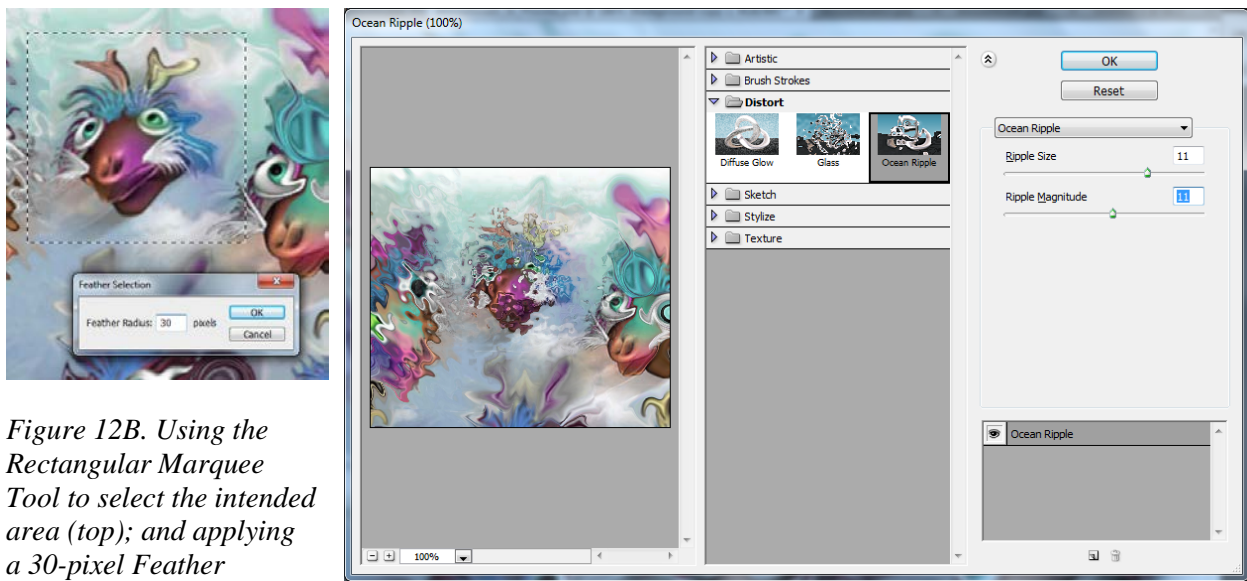


Figure 12B. Using the Rectangular Marquee Tool to select the intended area (top); and applying a 30-pixel Feather (bottom).

Figure 12C. Dragging the Ripple Size and Ripple Magnitude sliders until the desired effect is seen in the preview window on the left side of the tool window, and clicking the OK button to apply the desired effect.

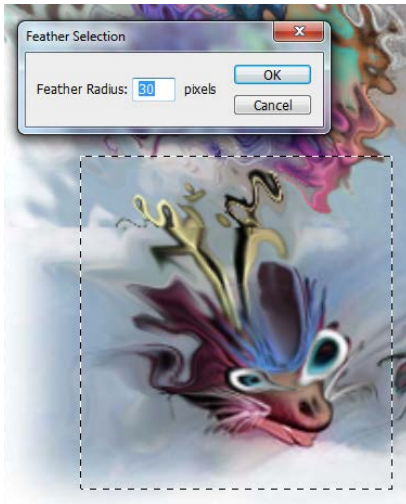


Figure 12D. Selecting the intended area and applying a 30-pixels Feather.

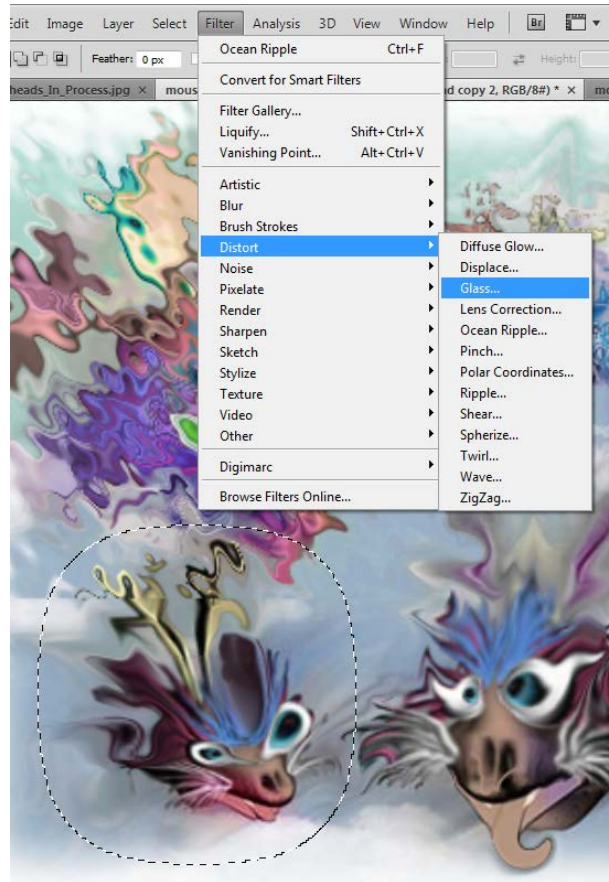


Figure 12E. Selecting the Glass Tool from the Distort submenu of the Filter menu.

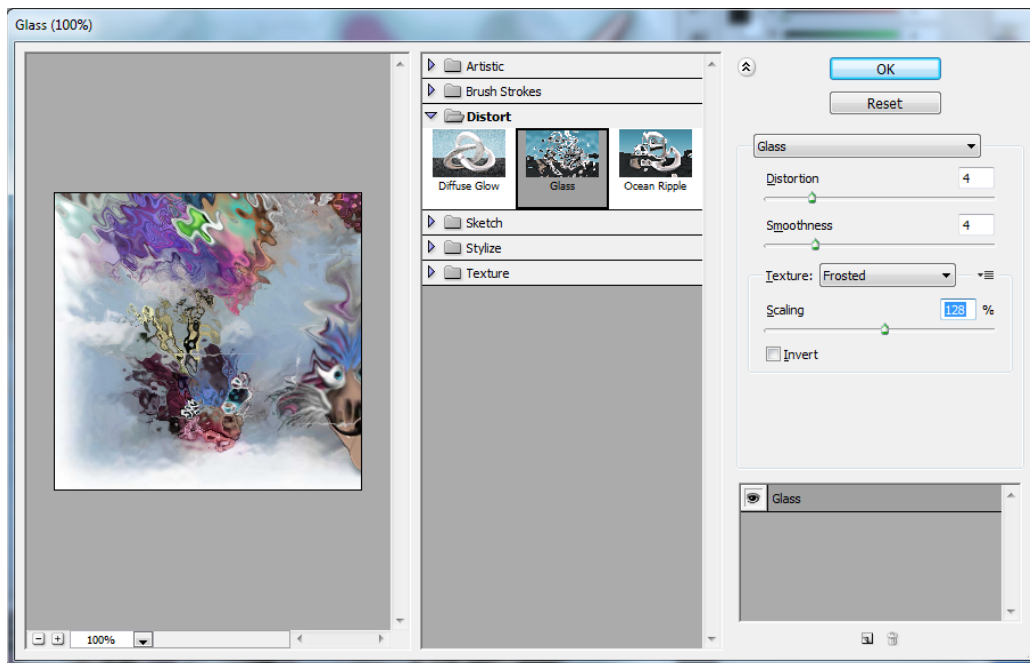


Figure 12F. Dragging the Distortion, Smoothness, and Scaling slider until the desired effect is seen in the previous window inside the Glass tool window; and clicking the OK button to apply the effect.

Using the Pinch Tool to squeeze the images

The Pinch Tool could be used to squeeze the shapes of portions of normal images into cartoon-looking ones; it pulls the pixels of the image inward towards the center and outward towards the edges. The steps for using the Pinch Tool are illustrated in *Figures 13A* and *13B*. The Spherize Tool could be used to fill an image into a spherical boundary, or to make it appear as seen from a spherical lens with high capacity of distortion (see *Figures 13C* through *13G* for various effects).

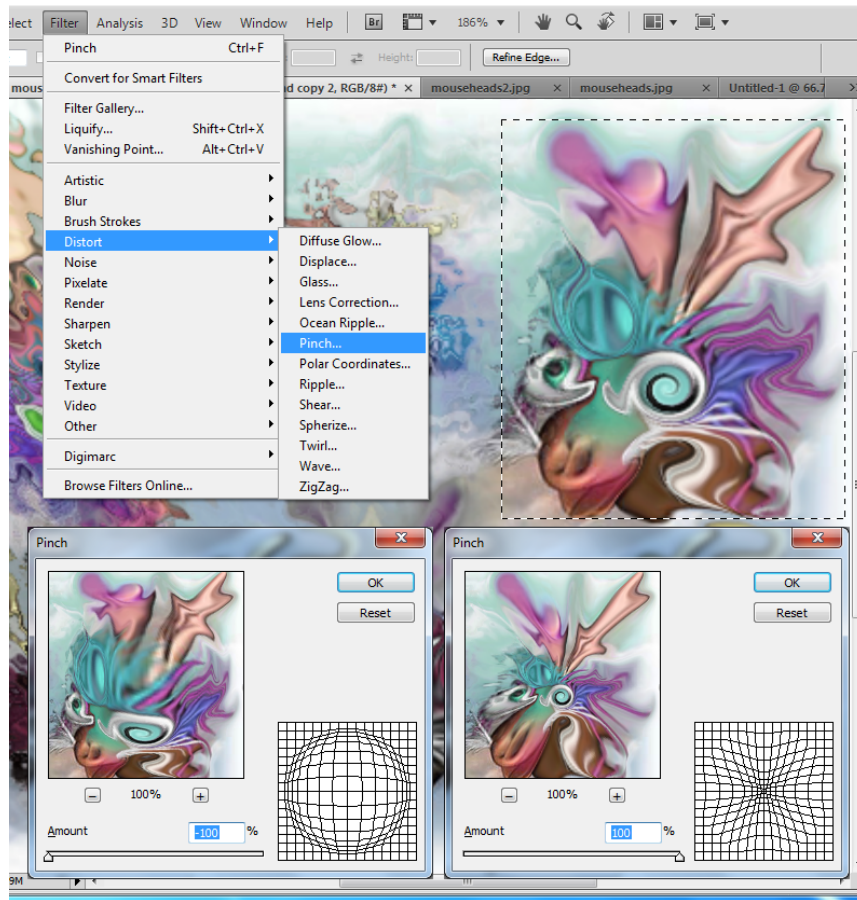


Figure 13A. Selecting the Pinch Tool from the Distort submenu of the Filter menu; dragging the slider to positive values beneath the Amount bar to pinch inward (decreasing the size of the central portion of the selected portion of the image), or to negative values to pinch outward (increasing the size of the central portion of the selected portion of the image).

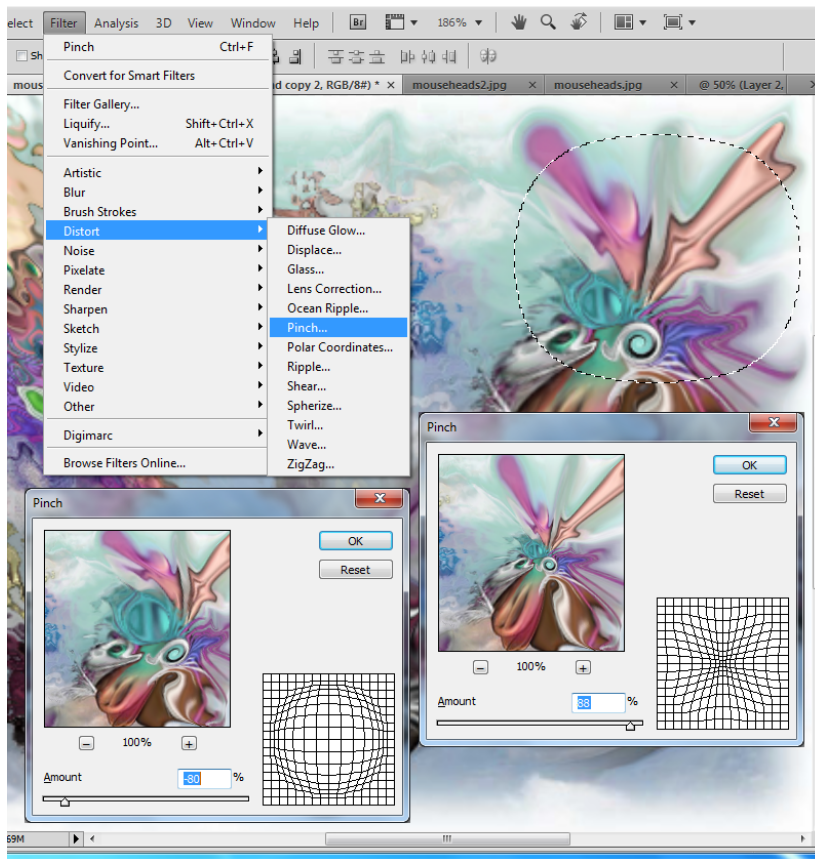
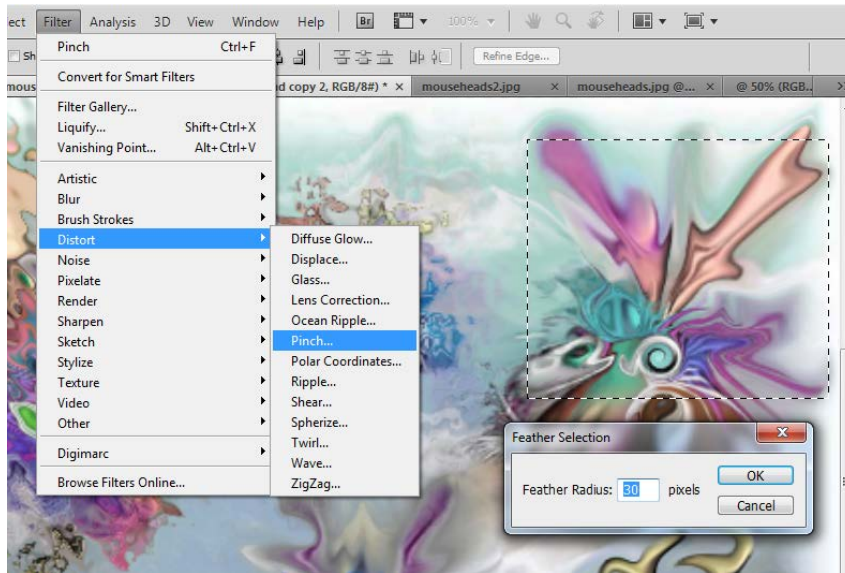


Figure 13B. Applying a second Pinch effect on another selected and feathered portion of the imagery.

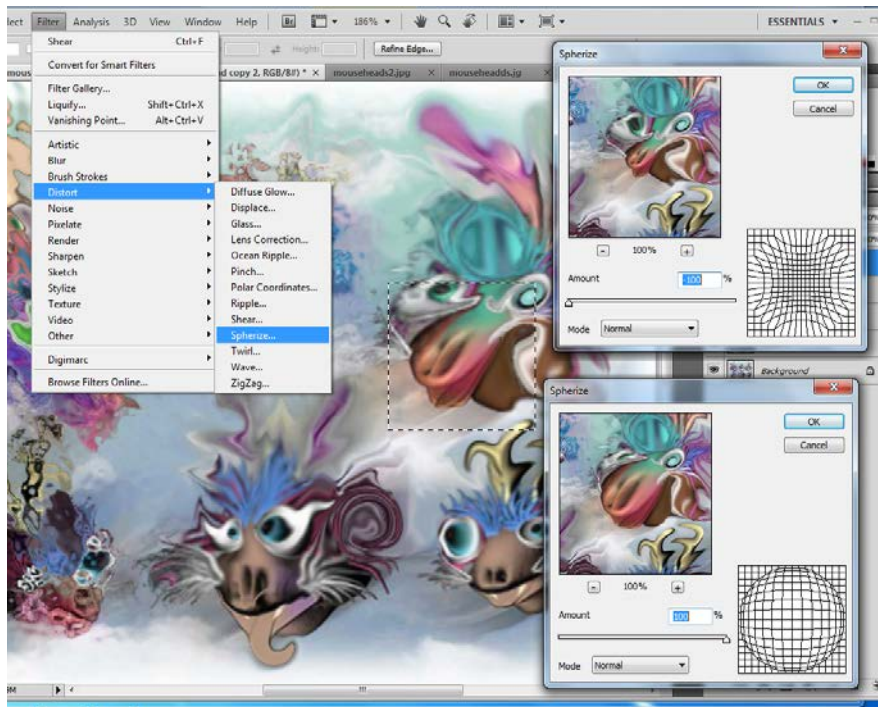


Figure 13C. Selecting the Spherize Tool from the Distort submenu of the Filter menu; Selecting the Normal Mode; dragging the slider to the positive and negative values under the Amount bar to see opposite effects; pressing the OK button to apply the desired effects.

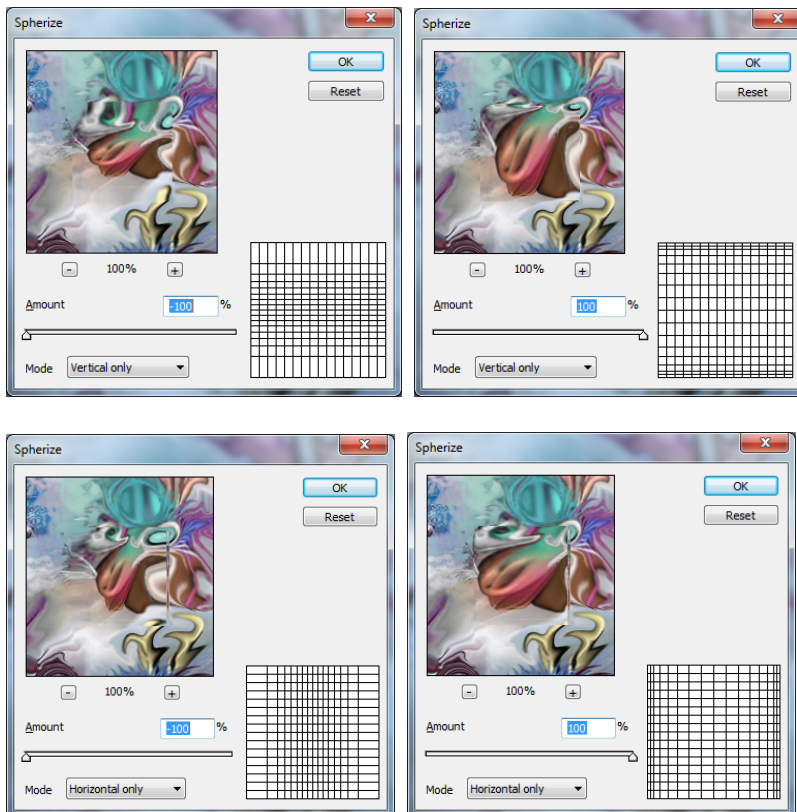


Figure 13D. Changing the Mode to Vertical Only and to Horizontal Only to see different effect.

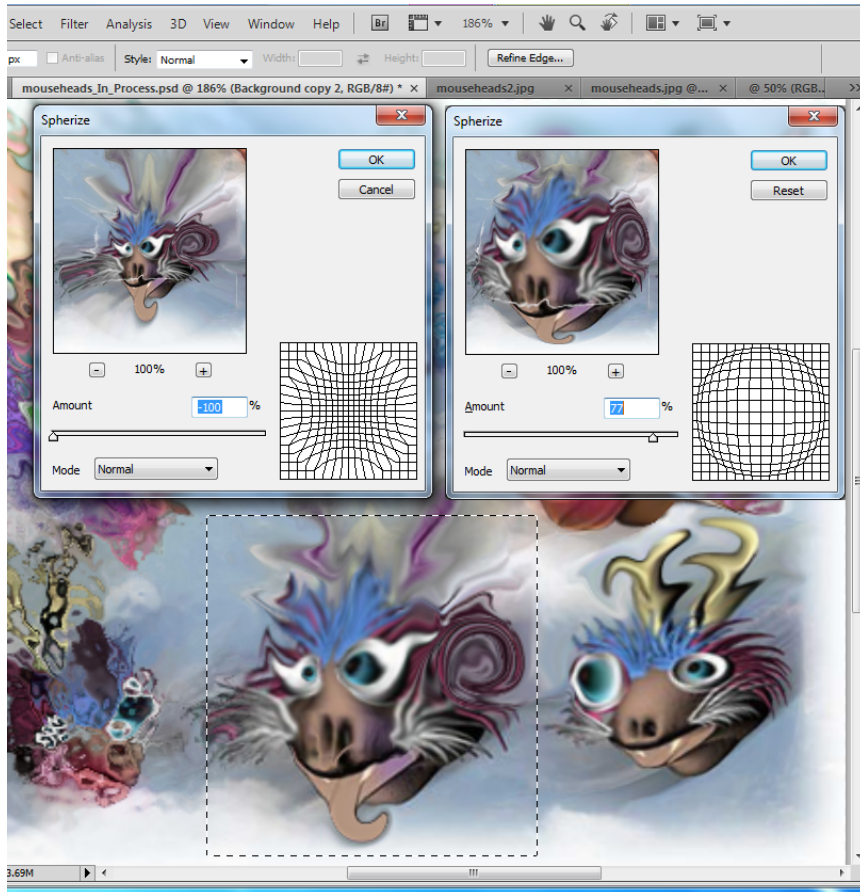


Figure 13E. Applying the Spherize Tool to another animal head.

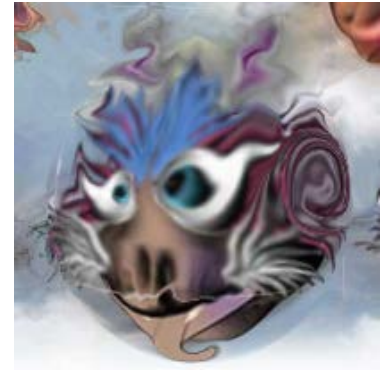


Figure 13F. The image expanding into the edge and filling the spherical shape with a positive Amount value.



Figure 13G. The image shrinking into the center of the spherical shape with a negative Amount value.

Using the Shear Tool to squeeze the images

The Shear Tool could be used to distort an image along a curve, making an image look like it is warping around a cylinder. Increased effects of shearing could be achieved by using the tool on the same portion of image several times. Shearing usually distort the image such that one side of the image will extend beyond the selection box; thus, in Photoshop, the portion of the image to be sheared should be first placed in a separate layer; and the selection box should be generously large to accommodate the resulting size. The steps for using the Shear Tool are illustrated in *Figures 14A and 14D*.

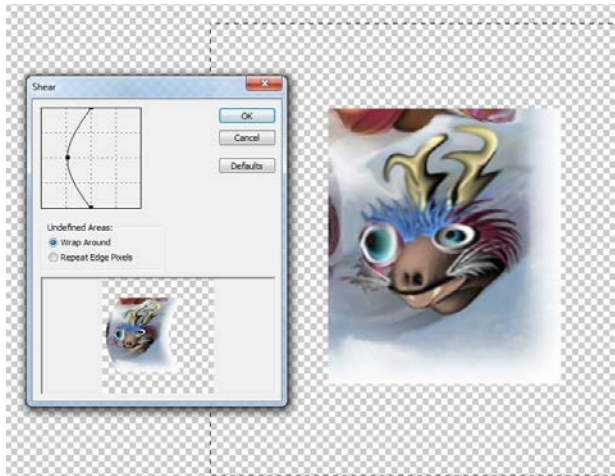


Figure 14A. Copying the image to be sheared and pasting it in a separate layer; selecting the Shear Tool from the Distort submenu of the Image menu; dragging the curve leftward or rightward to a desired effect and clicking the OK button to apply it to the image.

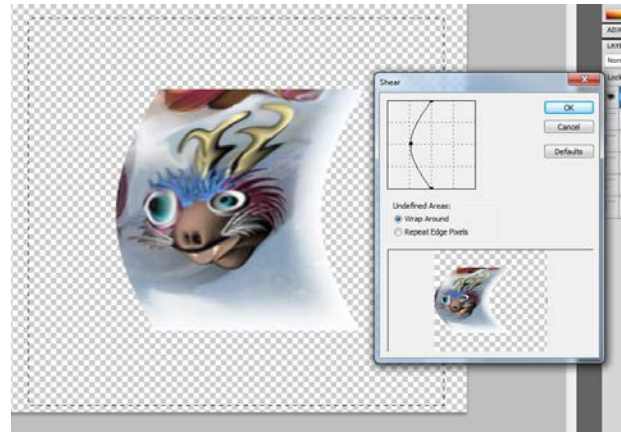


Figure 14B. Applying a second Shear effect on the already sheared image.

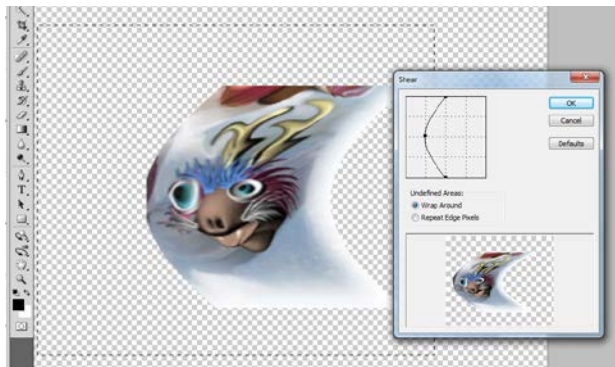


Figure 14C. Applying a third Shear effect on the twice sheared image.

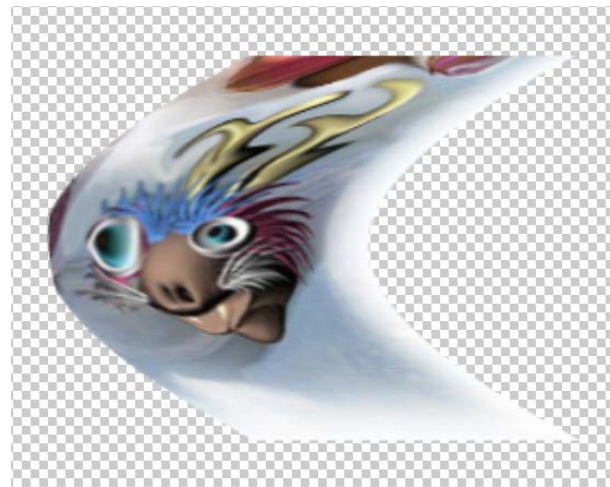


Figure 14D. The outcome.

Using the Zigzag Tool to create squeeze the images

The ZigZag Tool could be used to distort a selection radially, depending on the radius of the pixels in the selection. Unlike the Twirl Tool that changes the selected portion of the image into a winding pattern with a single turn from the center outward, the Zigzag Tool tend to create several concentric circular patterns; the difference is illustrated in *Figure 15A*. The steps for using the Zigzag Tool are illustrated in *Figures 15B* and *15D*. The Zigzag Tool could be selected from the Distort submenu of the Filter Menu.

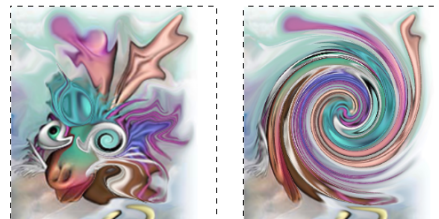
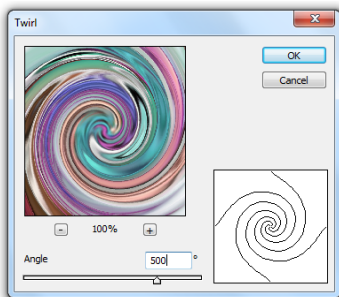
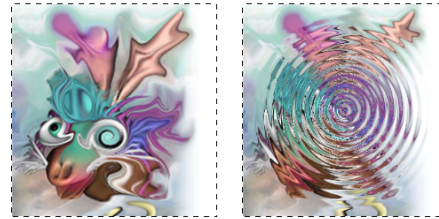
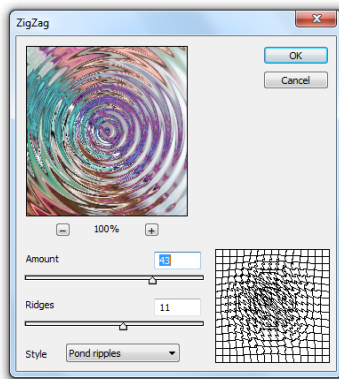
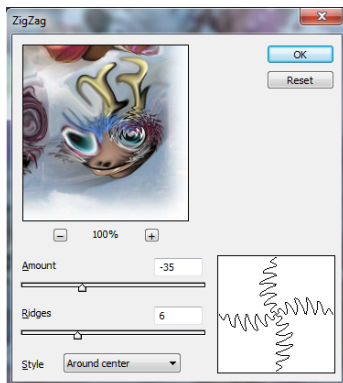
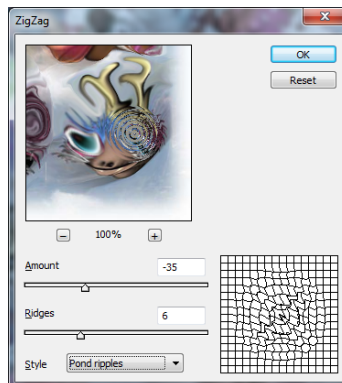


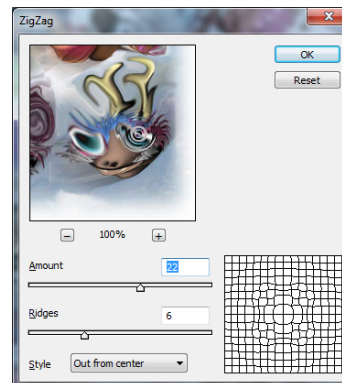
Figure 15A. Major difference between the effects of Zigzag (top) and Twirl (bottom) operation.



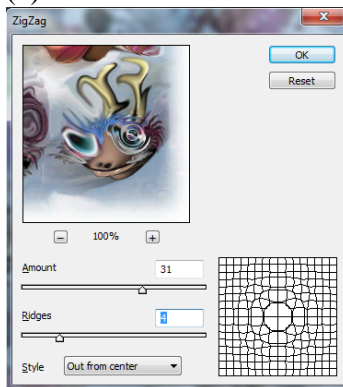
(1)



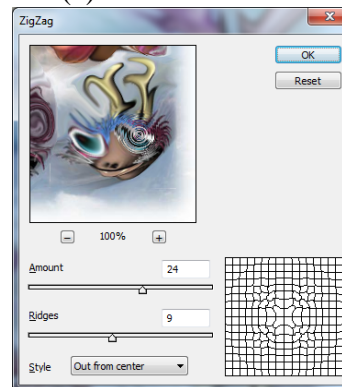
(2)



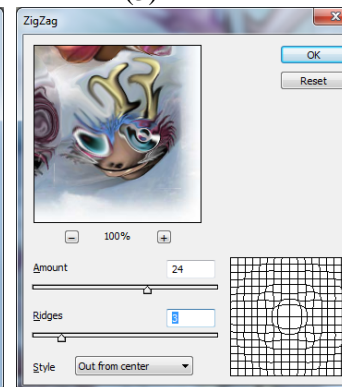
(3)



(4)



(5)



(6)

Figure 15B. Various effects of Zigzag operations based on different values for Amount and Ridges.



Figure 15C. The outcome of Zigzag operation on the right eye of the animal using the setting No. (4) in Figure 15B.



Figure 15D. The outcome of Zigzag operation on the right eye of the animal using the setting No. (6) in Figure 15B.

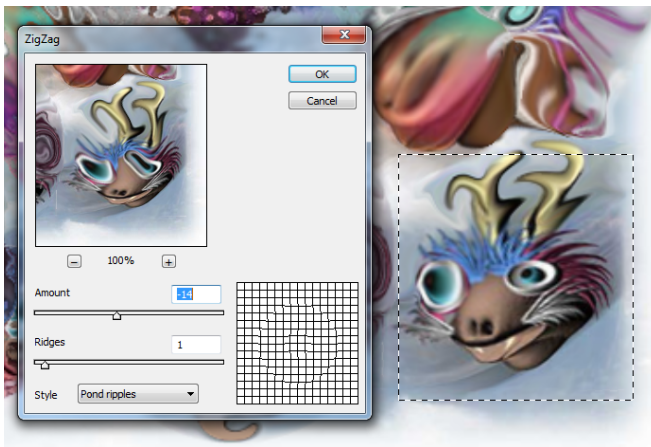


Figure 15D. Applying a Zigzag operation with a small negative value for the Amount, a value of 1 for Ridges, and the Style set to Pond ripples, yielding an interesting outcome on the eyes.

Combining the Spherize, Twirl and Zigzag Tools to convert a photorealistic image into a photorealistic geometric pattern

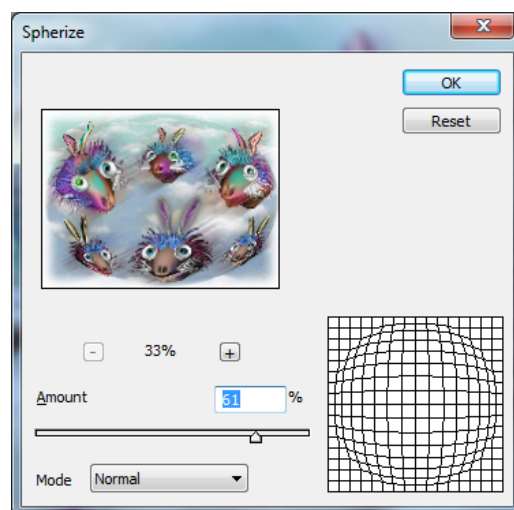
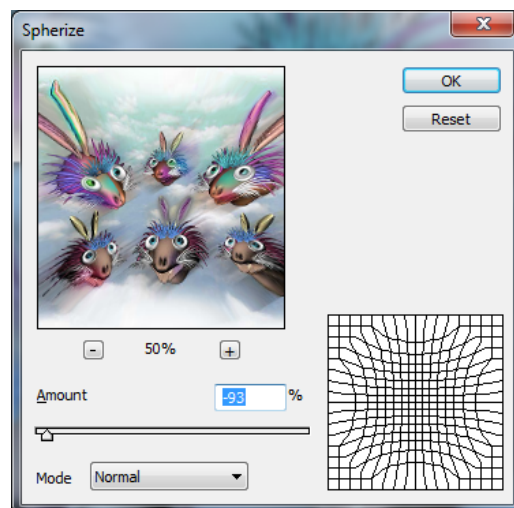
In the following exercise, the original image of animal heads will be converted into a geometric pattern, by a successive application of distortion effects from Spherize, Twirl and Zigzag Tools. The intermediate outcomes show the capability of combining different tools to create various effects. The central portion of the ending image has been used to create a repeated pattern.



The original image



Figure 16A. Different effects of Spherize operation on the same original image (top left), with the Amount set at a negative value (middle), and at a positive value (bottom), respectively.



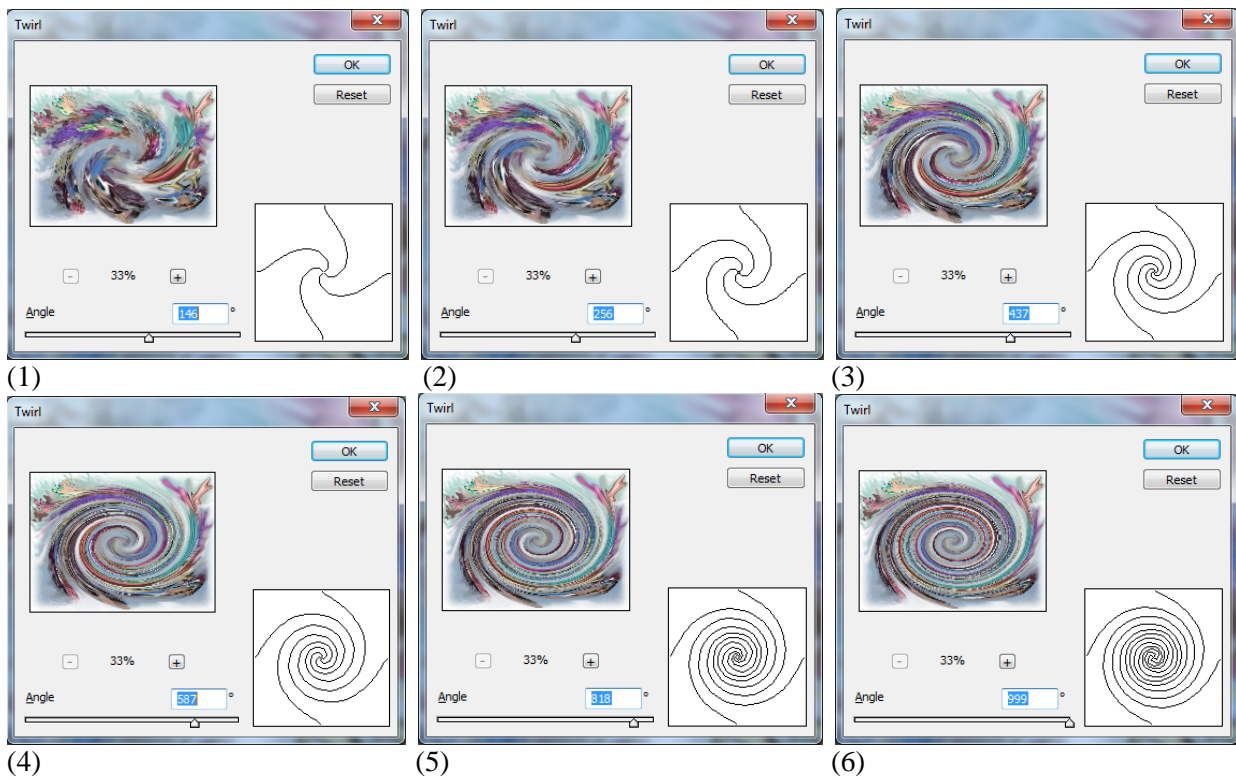


Figure 16B. Different effects of Twirl based on different values for the Angle.



Figure 16C. The outcome of applying the Twirl effect with the Angle setting No. (4) in Figure 16B.

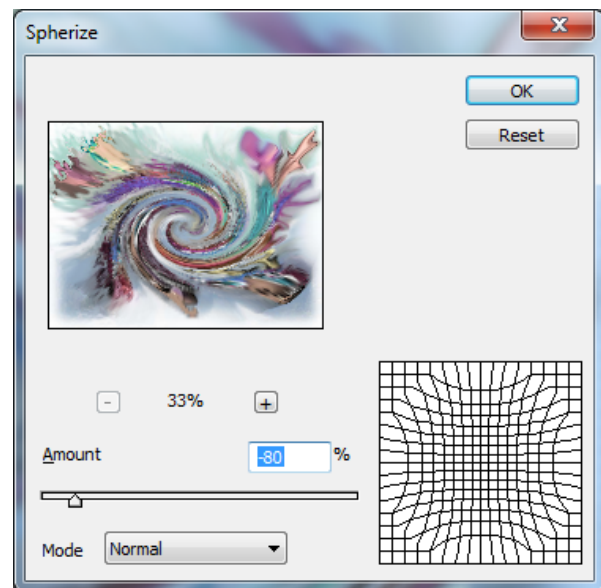


Figure 16D. Applying a Spherize effect on the image shown in Figure 16C, with Mode set at Normal, and Amount set at -80%.



Figure 16E. The outcome of Spherize operation shown in Figure 16 D.

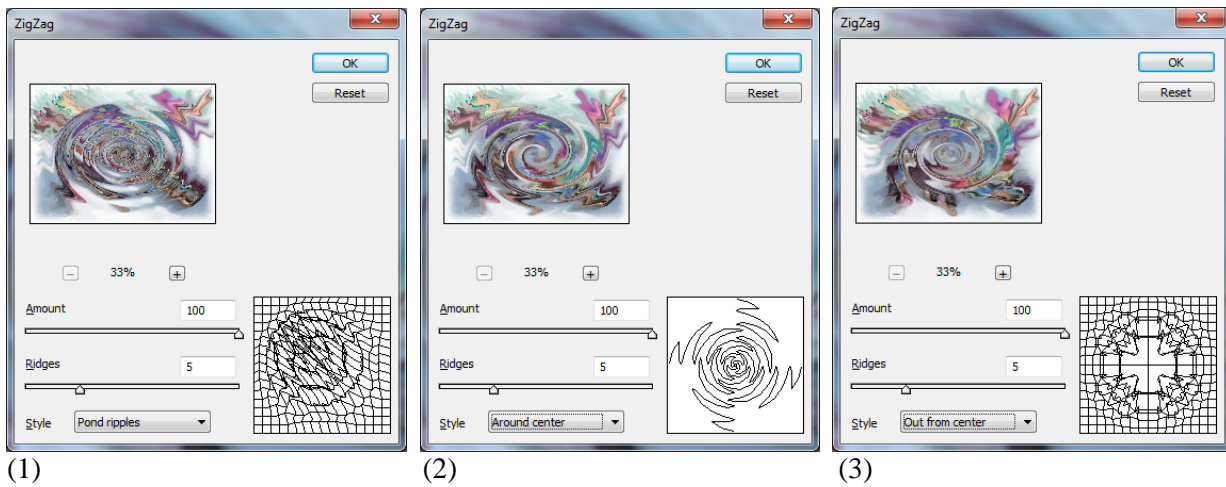


Figure 16F. Different effects of the Zigzag Tool with the Amount and Ridges set at different values.



Figure 16G. The effect of the Zigzag Tool with the Amount and Ridges settings shown in No. (3) of Figure 16F.

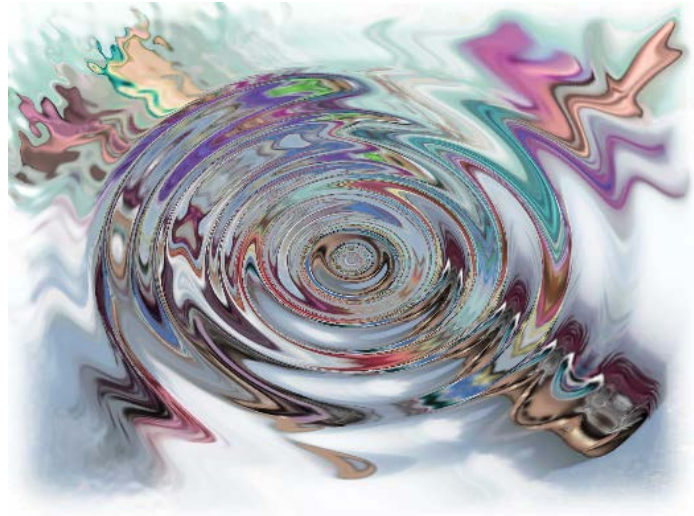
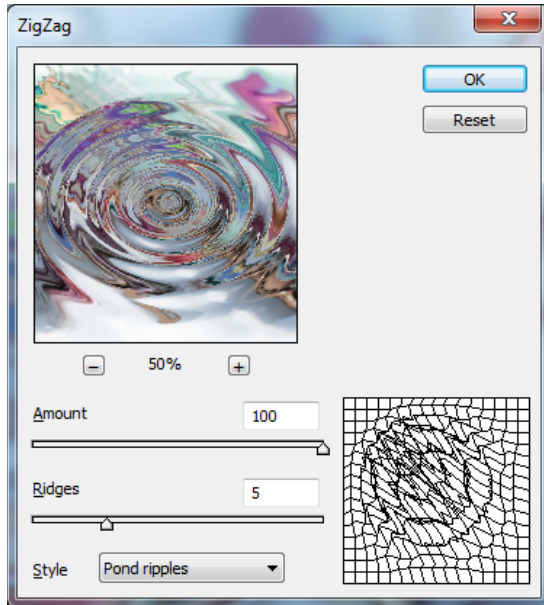


Figure 16H. The second application of the distortion effects from the Zigzag Tool, on the resulted image (shown in Figure 16G).

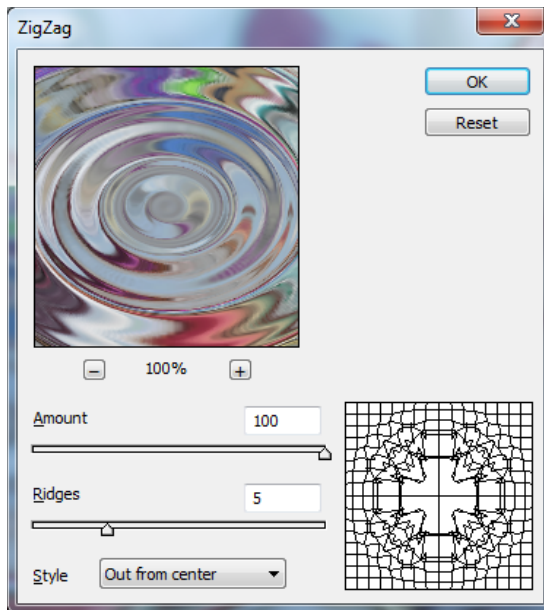


Figure 16J. The third application of the distortion effects from the Zigzag Tool, on the resulted image (shown in Figure 16H).

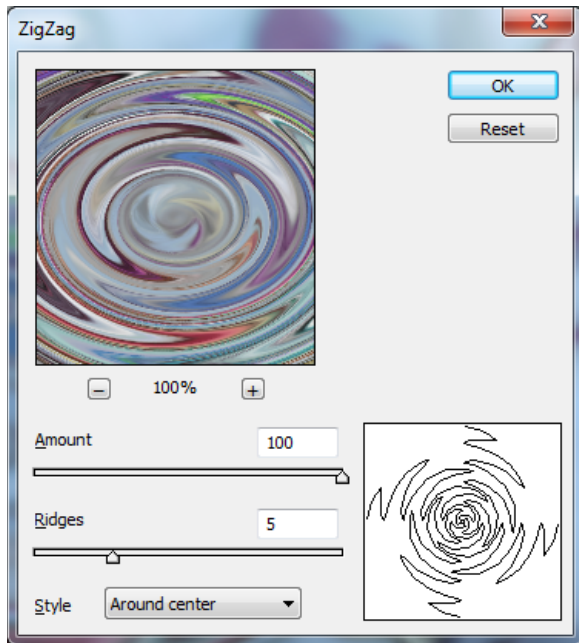


Figure 16K. The fourth application of the distortion effects from the Zigzag Tool, on the resulted image (shown in Figure 16J).



Figure 16L. The geometric pattern based on the outcome shown in Figure 16K.