

# **Pixeology Artistic Halftone**

## **Get Started**



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# Contents

<b>Chapter 1: Introduction .....</b>	<b>3</b>
How to Use This Manual .....	3
 <b>Chapter 2: Getting Started .....</b>	 <b>4</b>
Installation Requirements on Macintosh .....	4
Installation on Macintosh .....	4
Installation Requirements on Windows .....	4
Installation on Windows .....	4
Run Pixeology Artistic Halftone .....	4
 <b>Chapter 3: Stipple .....</b>	 <b>5</b>
Use Stipple Filter .....	5
Parameter .....	5
Add Strokes .....	7
Control Local Dot Size .....	8
 <b>Chapter 4: Anyscreen .....</b>	 <b>10</b>
Use Anyscreen Filter.....	10
Draw the Screen Unit .....	12
Adjust the Spacing between Screen Units .....	12
 <b>Chapter 5: Stochastic Screen.....</b>	 <b>13</b>
Use Stochastic Screen Filter.....	13
Parameters.....	13
 <b>Chapter 6: Texture Halftone .....</b>	 <b>14</b>
Use Texture Halftone Filter.....	14
Parameters.....	15
Methods of Creating Textures .....	15

# Chapter 1: Introduction

Pixeology Artistic Halftone is a set of Photoshop filters dedicated to make special halftone effects.

Pixeology Artistic Halftone consists of 4 filters, which are Stipple filter, Anyscreen filter, Stochastic Screen filter and Texture Halftone filter. All the 4 filters accept both 8 and 16 bit images which can be grayscale, RGB or CMYK color mode.

Stipple filter enables you to create stippling artworks of beauty in seconds, to personalize artworks by adding strokes and changing dot size. Anyscreen filter enables you to halftone color image with dots of any shape. Stochastic Screen filter can generate stochastic halftone image efficiently.

## How to Use This Manual

The **Getting Started** chapter illustrates installing and running Pixeology Artistic Halftone for the first time.

The chapter 3 to 6 explain in detail how to use each of the filters.

# Chapter 2: Getting Started

## Installation Requirements on Macintosh:

**Hardware :** IntelMac

**Mac OS X :** 10.6 or later

**Photoshop :** CS3 / CS4 / CS5 /CS6

## Installation on Macintosh:

1. Close Photoshop.
2. Start the installer that you downloaded from Pixeology website.
3. The License Agreement dialog will appear.
4. After reading the License Agreement, check "I Agree", and click **Continue**.
5. Select the install location in the list and click **OK**.

## Installation Requirements on Windows

**OS :** Windows 2000/XP/Vista/7

**Photoshop :** CS3 / CS4 / CS5 / CS6

## Installation on Windows:

1. Close Photoshop.
2. Start the installer that you downloaded from the Pixeology website.
3. The License Agreement dialog box will appear.
4. After reading the License Agreement, check "I Agree", and click **Continue**.
5. Select the install location in the list click **OK**.

## Run Pixeology Artistic Halftone

Start up Photoshop and open your image. Use the Pixeology Artistic Halftone filters by selecting one of the sub-menus in **Filter-> Pixeology Artistic Halftone**.

E.g. to make a stipple effect, select **Filter-> Pixeology Artistic Halftone-> Stipple...**, and enter the parameter in **Stipple** dialog box.

Following chapters illustrate in detail how to use the filters.



## Chapter 3: Stipple

Stippling is the creation of a pattern simulating varying degrees of solidity or shading by using small dots. Such a pattern may occur in nature and these effects are frequently emulated by artists.

In a drawing or painting, the dots are made of pigment of a single colour, applied with a pen or brush; the denser the dots, the darker the shading.

In printmaking, dots may be carved out of a surface to which ink will be applied, to produce either a higher or lower density of ink depending on the printing technique. In engraving, the technique was invented by Giulio Campagnola in about 1510.

The technique became popular as a means of producing shaded line art illustrations for publication, because drawings created this way could be reproduced in simple black ink. The other common method is hatching, which uses lines instead of dots. Stippling has traditionally been favoured over hatching in biological and medical illustration, since it is less likely than hatching to interfere visually with the structures being illustrated (the lines used in hatching can be mistaken for actual contours), and also since it allows the artist to vary the density of shading more subtly to depict curved or irregular surfaces.

**Stipple** is a filter which helps to realize stippling artworks .

### Use Stipple Filter

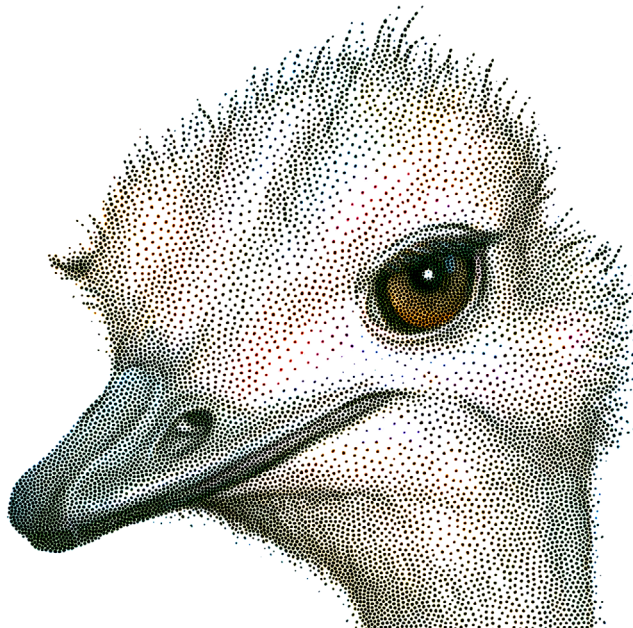
1. Open your image in Photoshop. The image should be of 8 or 16-bit and of grayscale, RGB or CMYK color mode.
2. Select menu **Filter->Pixeology Artistic Halftone->Stipple...**
3. Enter **Dot Size** parameter.
4. Click **OK**.

### Parameter

The parameter **Dot Size** controls the size of the dots. When you assign a smaller dot size, the filter generates larger amount of smaller dots to produce shading, or vice versa, when you assign a larger dot size, the filter generates smaller amount of larger dots.

**NOTE:** *The dot size should be in the range from 3 pixels to 20 pixels.*

The two images on the next page are produced by **Stipple** filter with different **Dot Size**.



**Dot Size = 7 pixels**

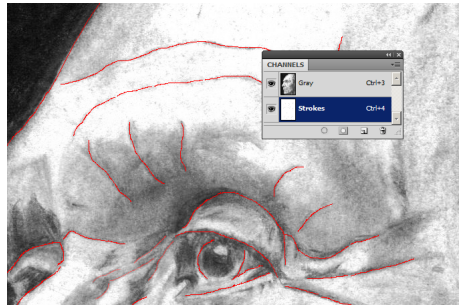


**Dot Size = 4 pixels**

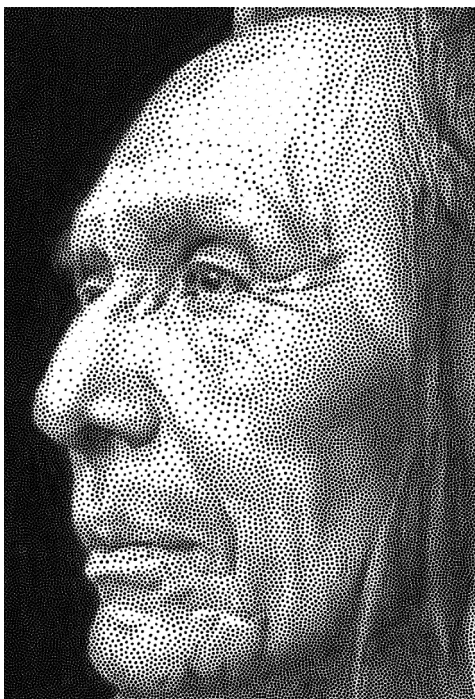
## Add Strokes

To highlight contours and shapes of objects, you may want to add strokes to refine the artworks:

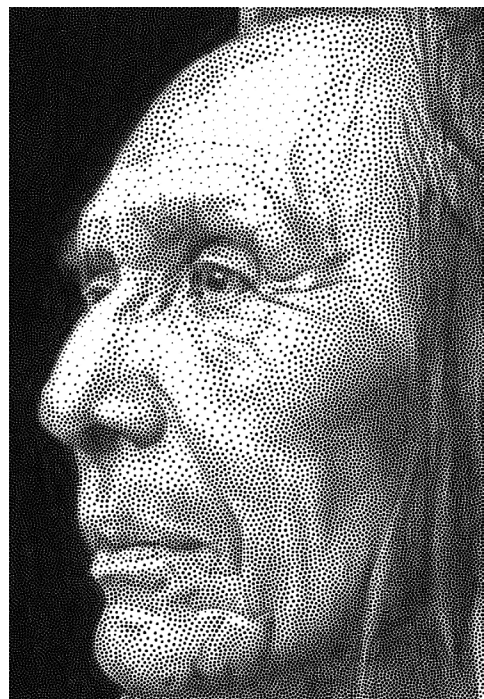
1. Open an image in Photoshop.
2. Add an alpha channel, and name it **Strokes**, which is case sensitive.
3. Fill the **Strokes** channel white.
4. Draw black strokes of 1 pixel width in **Strokes** channel with pencil tool.



5. Select Gray (or RGB, CMYK) channels.
6. Select Menu **Filter->Pixeology Artistic Halftone->Stipple...**, enter **Dot Size** and click **Ok**.



Stippling without strokes



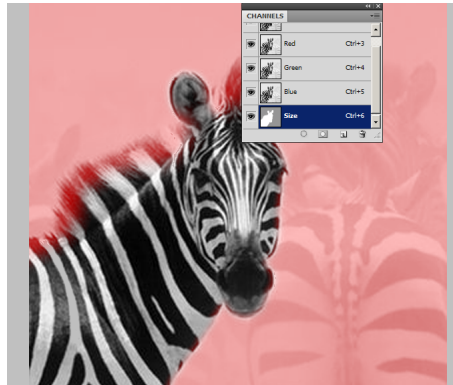
Stippling with strokes



## Control Local Dot Size

You can control dot size locally by adding a **Size** channel:

1. Open an image in Photoshop.
2. Add an alpha channel, and name it **Size**, which is case sensitive.
3. Fill **Size** channel white.
4. Select areas where you want to use smaller dots.



5. Fill selected area proper grayscale.
6. Select color channels.
7. Select Menu **Filter->Pixeology Artistic Halftone->Stipple...**, enter **Dot Size** and click **Ok**.



Stippling without local  
dot size control



Stippling with local  
dot size control

When you add a **Size** channel, the **Local Dot Size** is proportional to local value of **Size** channel. The relation of **Size Channel Local Value**, **Dot Size** and **Local Dot Size** is as following:

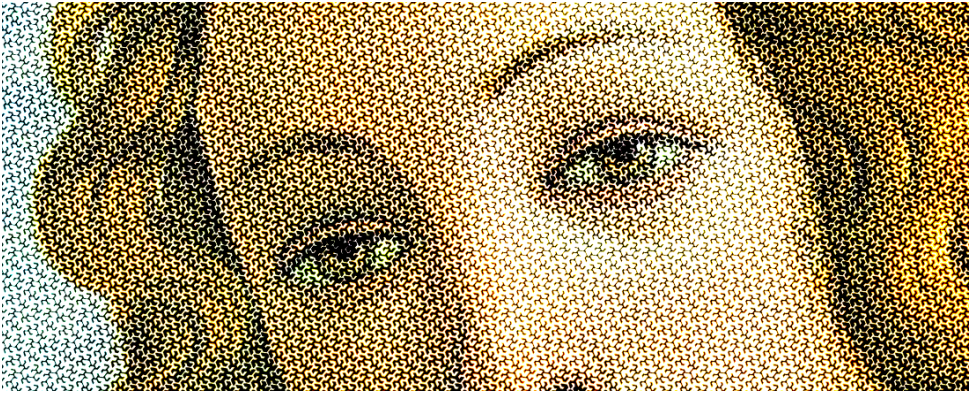
$$\text{Local Dot Size} = \text{Max}(\text{Size Channel Local Value}/255, 0.25) \times \text{Dot Size}$$

Suppose you assign **Dot Size** = 8 pixels, and at pixel [300, 250], **Size** channel has value 20, so the **Local Dot Size** at pixel [300, 250] is  $\text{Max}(20/255, 0.25) \times 8$  pixels, which is 2 pixels.

## Chapter 4: Anyscreen

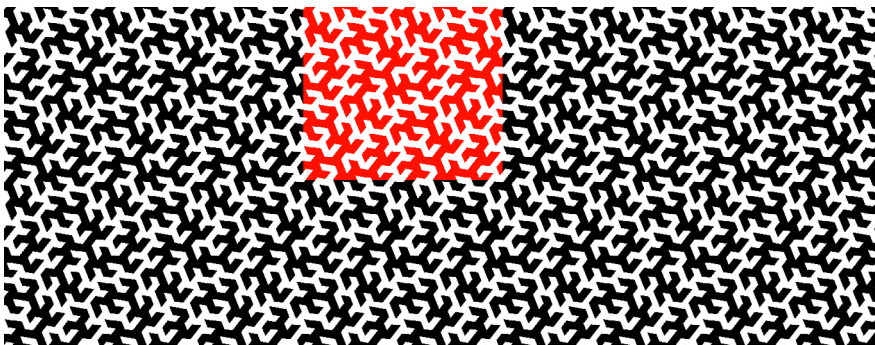
Halftone is a technique that simulates continuous tone image through the use of solid colored dots, varying either in size, shape or spacing. The regular pattern of dots is called screen. In general, round, elliptical or square dots are used to form screens.

**Anyscreen** filter helps to construct screen of any shape, as following image shows.

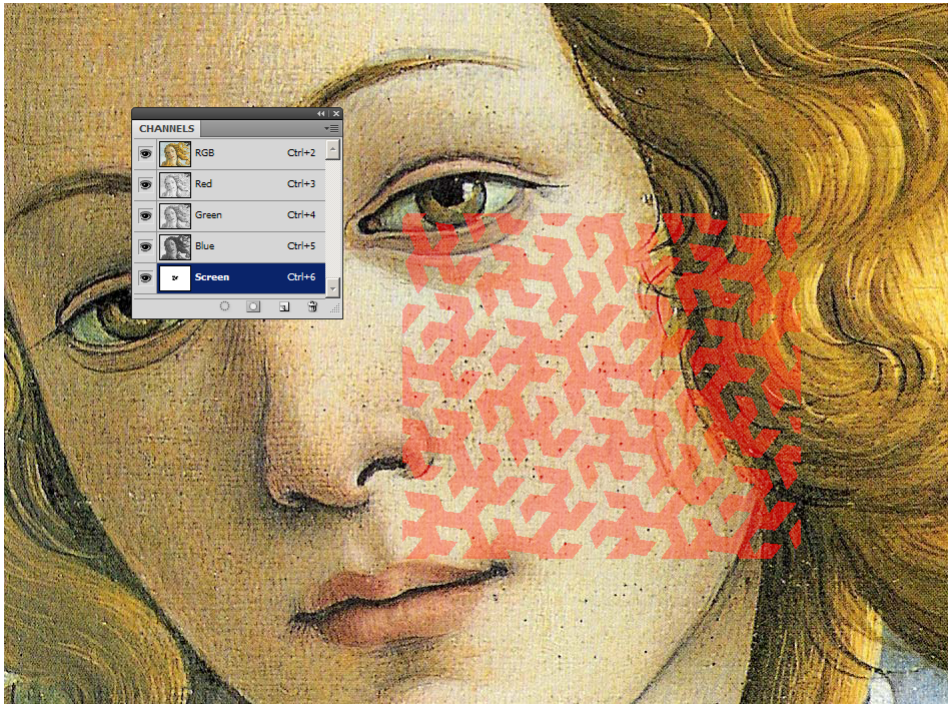


### Use Anyscreen Filter

To apply **Anyscreen** filter, you need to add an alpha channel named "**Screen**" or "**screen**", case sensitive, which contains a unit of the screen. The following graphic shows the screen applied to the above picture and a unit of the screen (the red).



After finishing the **Screen** channel, do the following steps to use **Anyscreen** filter:



1. Select RGB (or CMYK, Gray) channels.
2. Select menu **Filter->Pixeology Artistic Halftone->Anyscreen....**
3. Set **Scale** parameter in the dialog box and click **OK**.

**NOTE:** *The scale should be in the range from 1/1 to 1/6.*

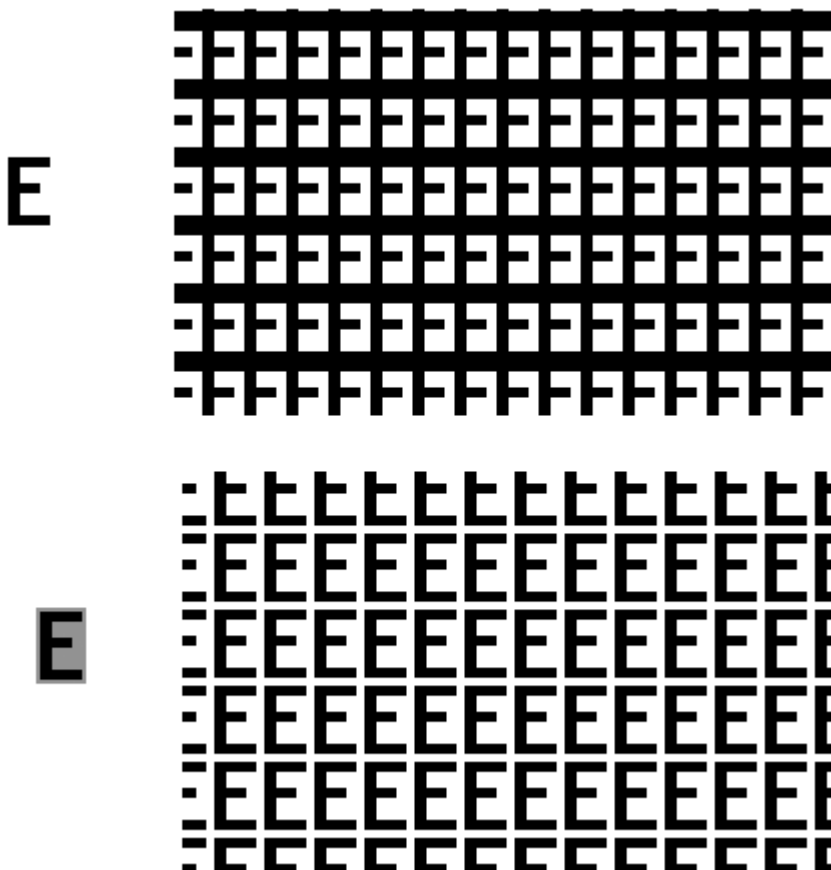
## Draw the Screen Unit

A screen unit must be a graphic which can be tiled seamlessly. You can use other vector graphic design softwares, such as Adobe Illustrator, to sketch and export it as a black/white image.

**Note:** *The pixels of the graphic must be of value 0.*

## Adjust the Spacing between Screen Units

To increase the spacing between screen units, you could fill gray color around the screen unit graphic. The following image shows how to control the spacing between graphs.





## Chapter 5: Stochastic Screen

**Stochastic Screen** filter offers you convenience of forming stochastic halftone images with ease.

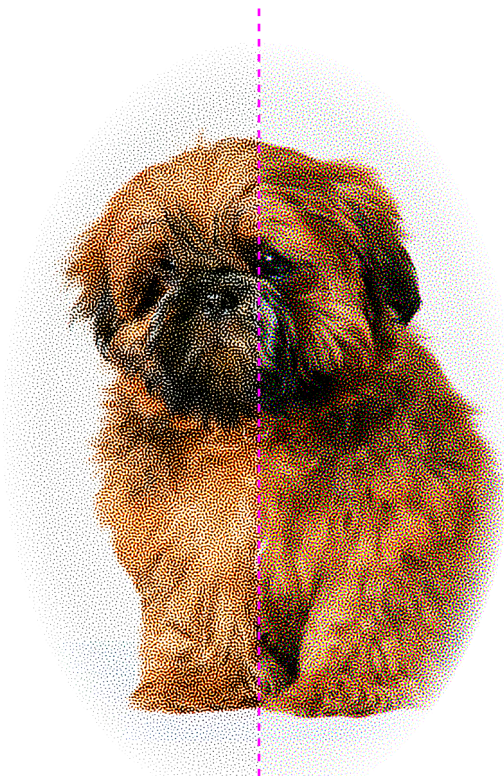
### Use Stochastic Screen Filter

1. Open your image in Photoshop, which should be of 8 or 16-bit depth, and of grayscale, RGB or CMYK color mode.
2. Select menu **Filter->Pixeology Artistic Halftone->Stochastic Screen...**
3. Enter **Dot Size** parameter, and click **OK**.

### Parameters

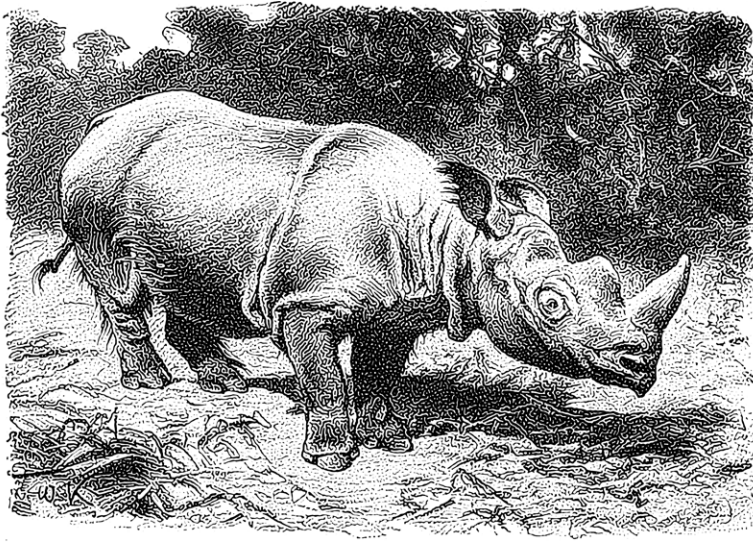
**Dot Size:** Control the fineness of the stochastic screen texture. The smaller dot size is, the finer stochastic halftone picture will be generated. **Dot Size should in the range 3 pixels to 30 pixels.**

**Coincident Screen:** When you check **Coincident Screen**, the screens of all planes of the image coincide. The following image presents the difference between the two modes: the left half part of the image is generated in **Coincident Screen** mode whereas the right half not.



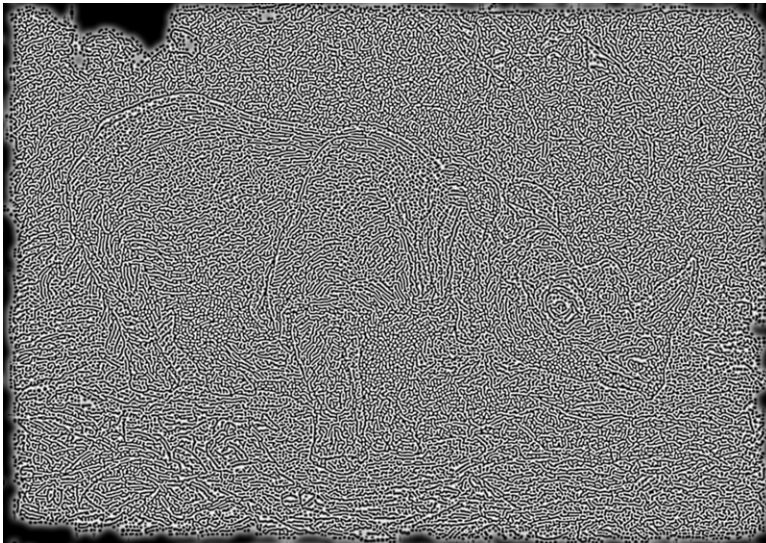
## Chapter 6: Texture Halftone

**Texture Halftone** filter creates halftone image with specified texture. As the image bellow shows.



### Use Texture Halftone Filter

To apply **Texture Halftone** filter, you need to add an alpha channel named "**Texture**" or "**texture**", case sensitive, which contains the texture. The image bellow is the Texture channel used to create the halftone image above.



You can download the sample PSD files at <http://www.pixeology.com/ArtisticHalftone/download-artistic-halftone-plugin.html>.



After you added the texture channel, do the following.

1. Open your image in Photoshop, which should be of 8 or 16-bit depth, and of grayscale, RGB or CMYK color mode.
2. Select menu **Filter->Pixeology Artistic Halftone->Texture Halftone...**
3. Enter **Dot Size** parameter, and click **OK**.

## Parameters

**Dot Size** is the feature size of the texture. **Dot Size should be in the range 5 to 20 pixels.**

## Methods of creating the texture channel

Any texture can be used to halftone an image. The texture in the page before is created with a method called **sharpen and blur**.

A *sharpen and blur* action can be downloaded at <http://www.pixeology.com/ArtisticHalftone/download-artistic-halftone-plugin.html>.

The halftone image bellow is create with the texture of the image itself. The texture of an image can be extracted with highpass filter.

