

Drawing Figures in Framegrabs

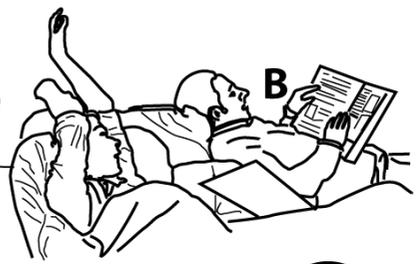


It is frequently very useful to make line drawings of participants and other phenomena in Framegrabs:

- It is easier to hide the identities of participants, while retaining vivid images of what they are doing.
- Line drawings (Vector Paths rather than collections of colored pixels) can appear as much higher quality artwork than framegrabs in final publication (1200 dpi. versus 300 dpi)
- There is little quality loss when then are xeroxed. They do no muddy up the way that images from framegrabs do.

16 Father: [Sandra.
17 Sandra: [Yeah.
18 Father: (Number) this one.
19 (1.3)
20 Sandra: [Twenty Five
21 Father: [Ten over six
21 Sandra: Yeah.
23 (0.6)
24 Father: is **on:e**
25 (1.0)
26 Father: ehh: en four si-four over six.
27 Reduce that down is one en two thirds
28 (0.5)

*Requests
Orientation*



*Environmentally Coupled
Gesture*

Equipment

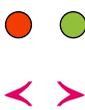


- 1) I highly recommend Adobe's *Creative Suite*. It contains the central graphics programs that I use all the time including *Photoshop, Illustrator, InDesign*, and *Acrobat Professional*.
- 2) I prefer Macintosh Computers, but Adobe products (except for *Premier*) work equally on Windows Machines.
- 3) A **Drawing Tablet** is immensely helpful. Rather than trying draw intricate shapes with a mouse it allows you to use a pen. I use a *Wacom Intuos 6 x 8*. I tried a smaller one and it wasn't useful. The 6 x 8 is excellent. I highly recommend a tablet for drawing. However it does cost money and you can do what is described here with a standard mouse.

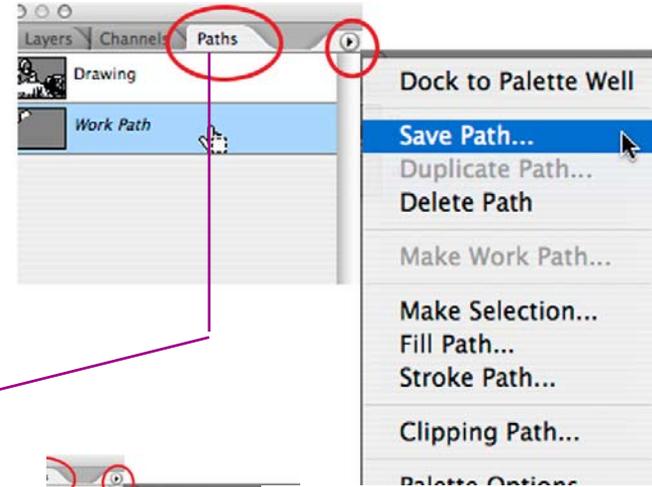
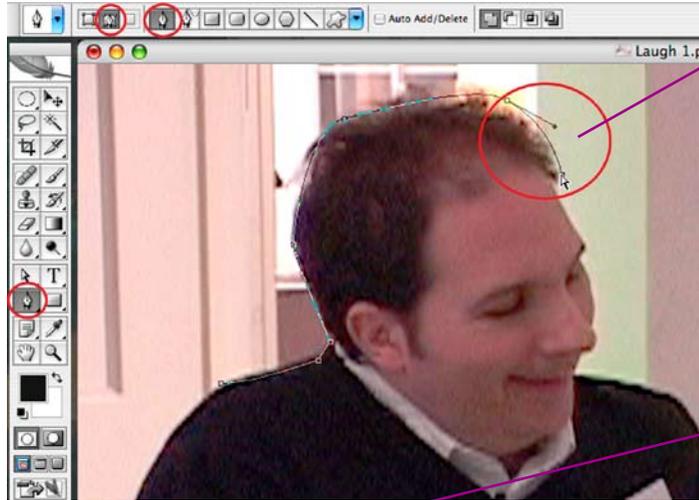


<http://www.wacom.com/>

Overview of How to Make Drawings



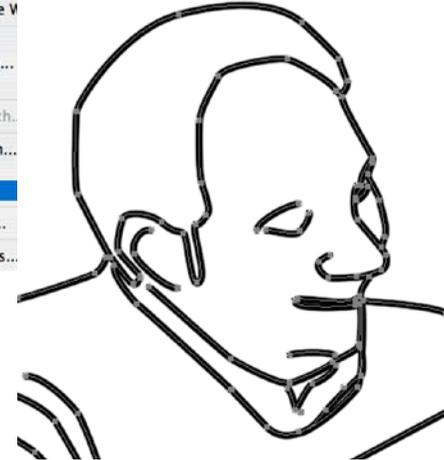
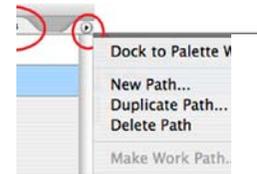
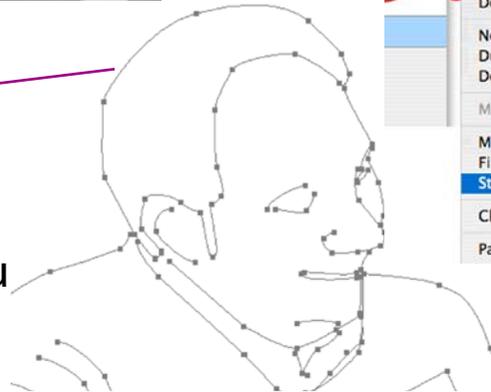
1) Use the **Pen Tool** in **Photoshop** by make **Paths** by drawing over, or tracing the figures you want.



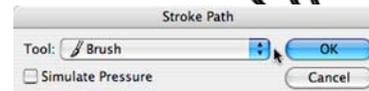
2) **Save** the path(s)

3) **Stroke** these paths

- Either in **Photoshop** with the **Brush Tool**
- Or in **Illustrator** where you **select the paths** you want and **stroke** them.



3) Place Final Image in your InDesign Transcript.



Setting Up a Photoshop File for Drawing

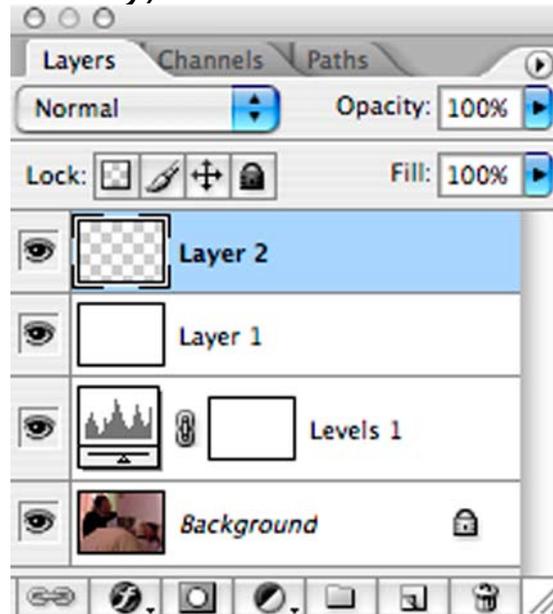
Drawing is easier if you first make a couple of helpful layers in your Photoshop File.

- 1) **Levels Adjustment Layer** (make image lighter)
- 2) **New Layer Filled with White** (see paths easily)
- 3) **New Blank Layer**

All of this is done from the Layers Palette.
The next pages describe how.

If you are going to making a number of drawings you can create an Action in Photoshop to make this set of layers automatically.

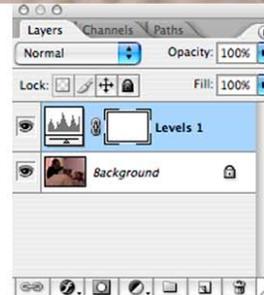
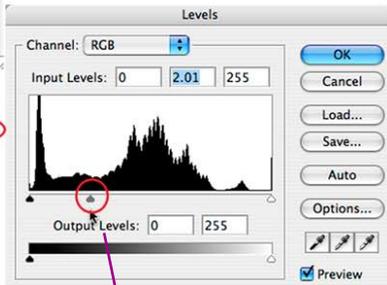
Go to the Actions, Palette, Record a New Action and make all the layers, then stop recording.



Setting Up a Photoshop File for Drawing



1) Create a Levels Adjustment Layer.

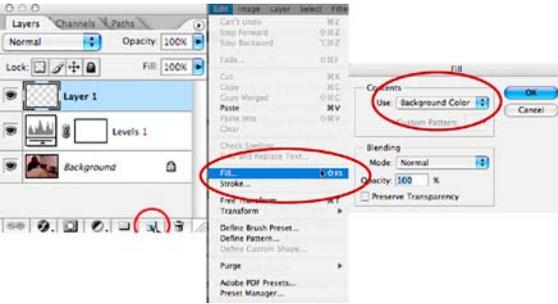


Use the circular black and white icon on the bottom of the layers palette. Move the center pointer to the left to make the Image very light. This makes it easy to see detail in dark areas.

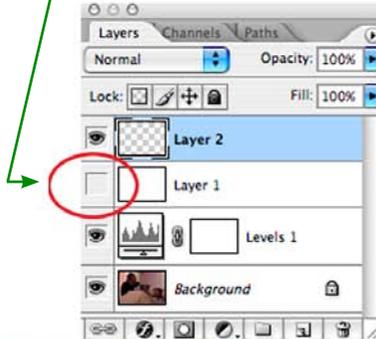
Setting Up a Photoshop File for Drawing

2) Create a new Layer and fill it (from the Edit Menu) with White.

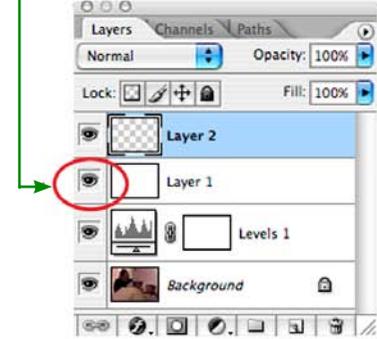
Toggle the Visibility of this Layer
To see clearly what your paths will look like.



Invisible
White Layer



Visible
White Layer

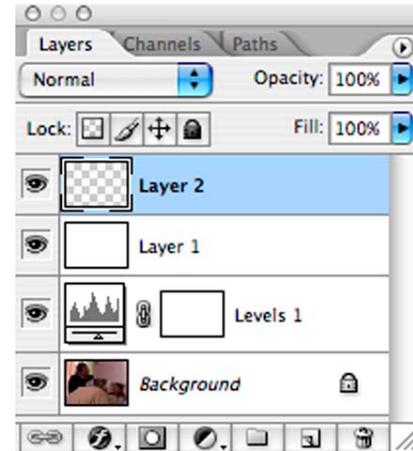


Setting Up a Photoshop File for Drawing



3) Create a *new blank layer* →

Efforts to Stroke from the Path Palette will Fail if you don't have a layer to stroke in.



Drawing with the Pen Tool

Vector Artwork: The drawings being made here are *Paths*.

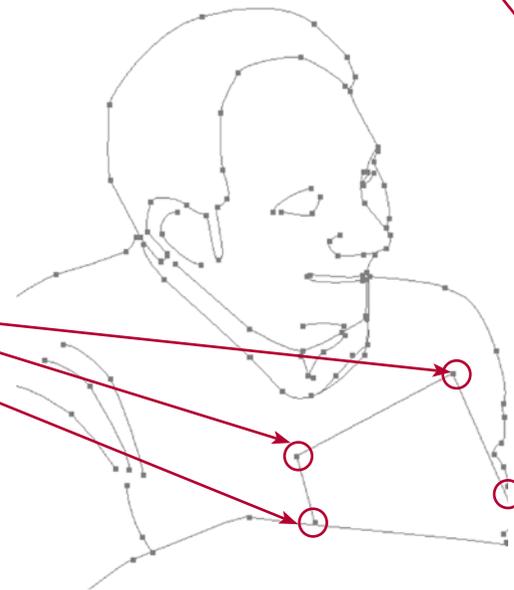
Instead of being created like images in Photoshop — as operations on specific pixels in the image— Paths are mathematical descriptions of where lines will be drawn.

You use the *Pen* tool to create paths.

The *Pen* is very different from other drawing tools in Photoshop, such as the Brush.

Instead of drawing the shape you want you set points where there will be significant changes in the line.

For example to draw a straight line you hit the screen where you want the line to begin, then pick the pen off the screen, and hit it again where you want it to end. You don't use the pen to draw the line between these two points.



Drawing with the Pen Tool

Curves: Points in the midst of curves have little handles on them.

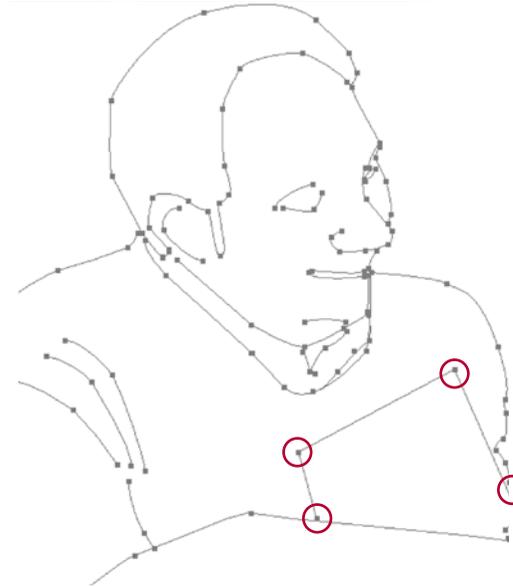
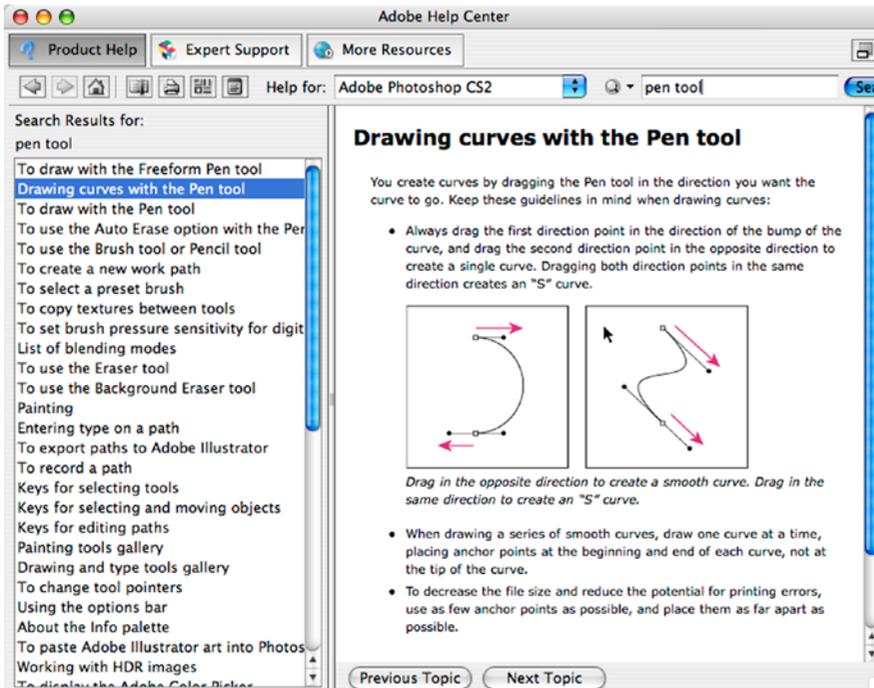
You adjust the shape of the curve by moving the handle.

The best way to understand, and become skilled in this, is simply to play around a bit and experiment.

The [Help Systems](#) of both [Photoshop](#) and [Illustrator](#) describe in detail how to use the pen to draw curves.

DO look at this. Here is part of the information from

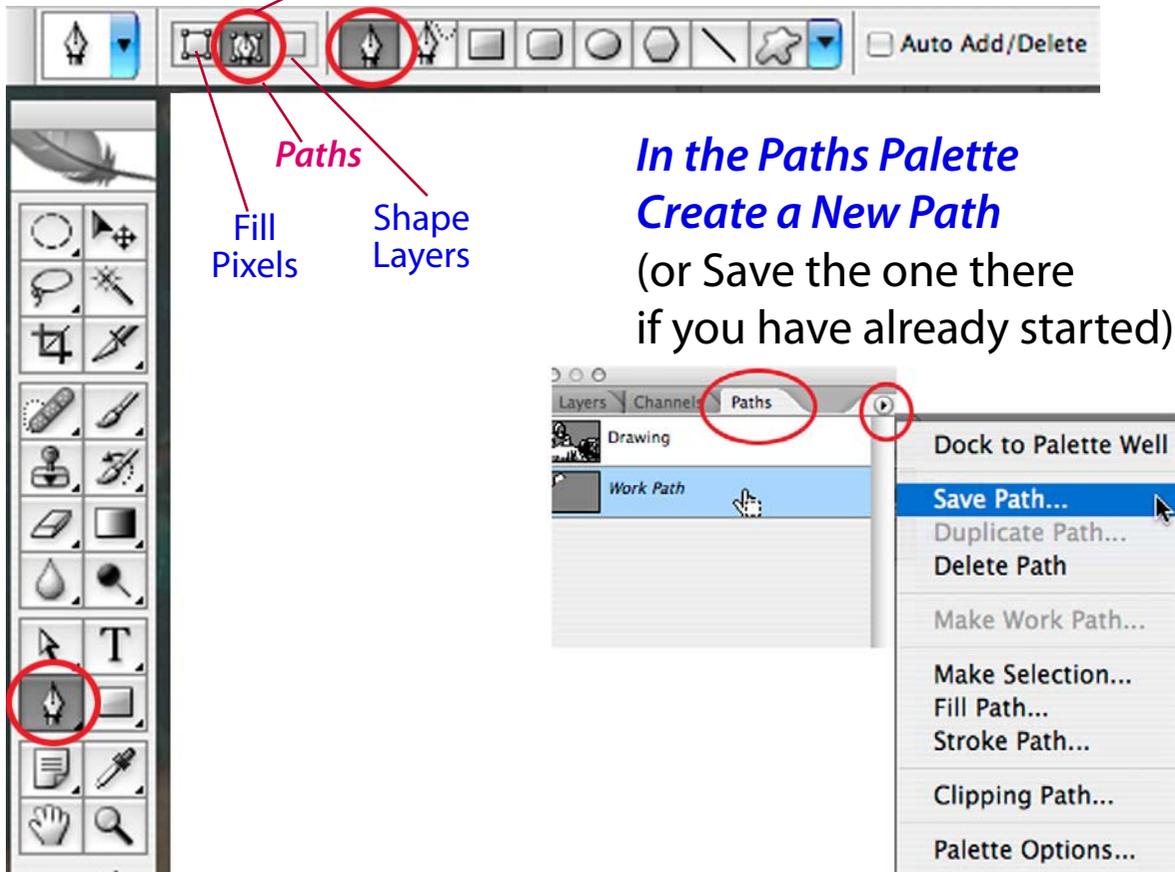
Photoshop:



Setting up the Pen Tool

You must actually make a couple of selections in both the Side and Top toolbars to work correctly with the pen.

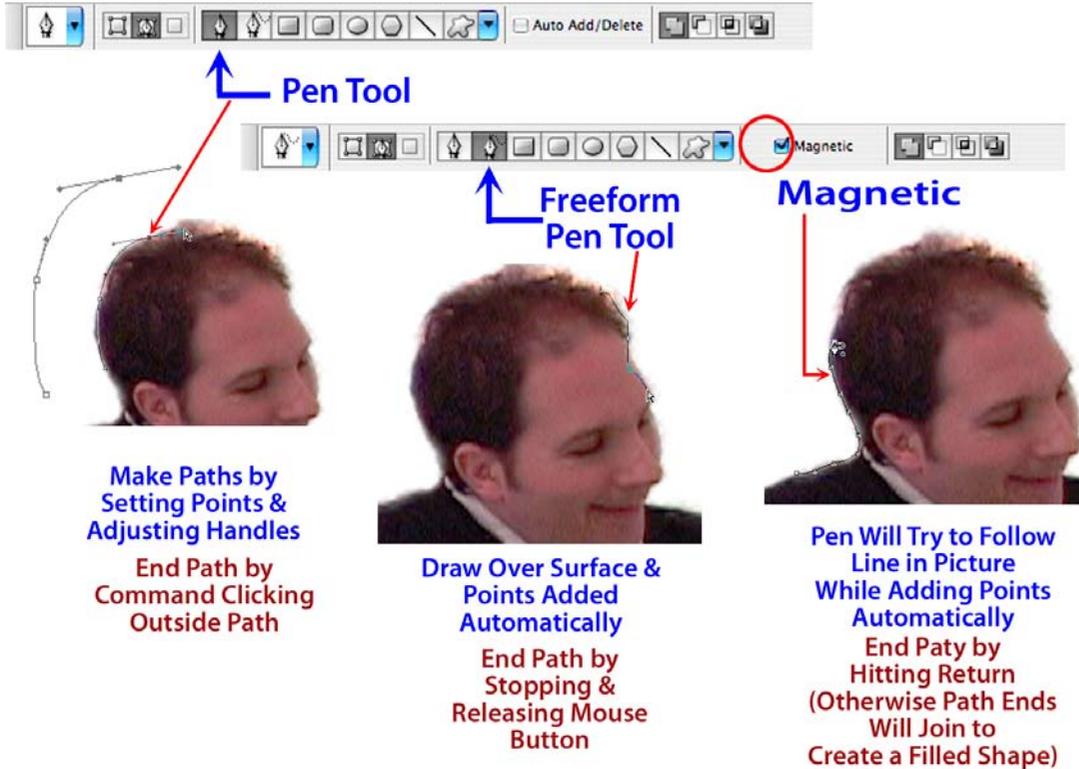
- Side Toolbar:** Select the Pen Too.
- Top Toolbar:** Make sure you select the little, middle icon, with the pen surrounded by paths:



3 Pen Tools

There are actually 3 Pen Tools

- 1) **Pen Tool** -- Hit to add points and shape curve with handles
- 2) **Freeform Pen Tool** — Just Draw and Points are Added Automatically
- 3) **Freeform with Magnetic** — Pen will try and follow shapes in image.



I usually use the Basic Pen Tool.
The Magnetic sounds great, but frequently our images are too muddy to give the tool sharp contrasts to work with.
It is easy to get jagged with the Freeform Pen.

Note that you end each type of path in a different way. Until you realize this it can be a hassle to stop adding points, or you suddenly find yourself with a filled path you don't want.

Drawing with the Pen Tool

The best way to learn to use the Pen Tool is to

- 1) Look at the Instructions in Photoshop Help
- 2) Play and Practice a bit.

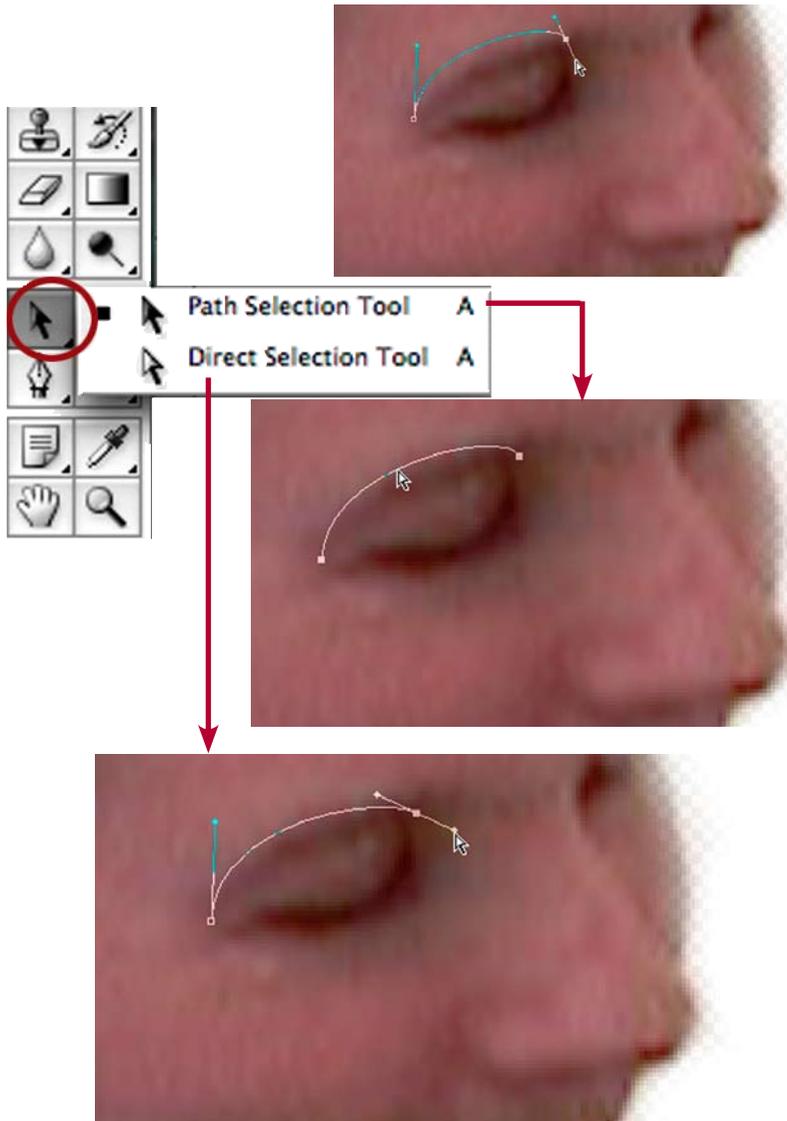
It quickly becomes something your hands know how to do.

Basically

- 1) Click where you want to add a point.
Don't lift up the mouse button.
Move the button slightly in the direction you want the line to go.
This will begin the handle for the line.
- 2) Adjust the handles so that the line follows the shape of what you tracing.
Both move the handle around & change its shape.
- 3) Hit the Command key to adjust points.
You can move the point and adjust handles.



Reshaping Paths with the Path Selection Tools



To Experiment with Drawing with the Pen Tool it might be useful to take something very simple, such as the path for an eyebrow. As you set the first point move the mouse up and to the right to start the curve.

Just above the Pen Tool on the Left Toolbar are the **Tools for Selecting Paths**. There are 2.

The **Path Selection Tool** (solid arrow) allows you to select a whole path, for example to move it.

The **Direct Selection Tool** (hollow arrow) selects particular points within a path. You can reshape a curve by adjusting the handles on the points.

When using the Pen Tool you can go to the Path Selection Tools immediately by holding down the Command Key.

Drawing Suggestions



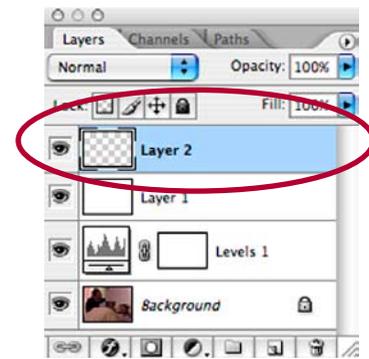
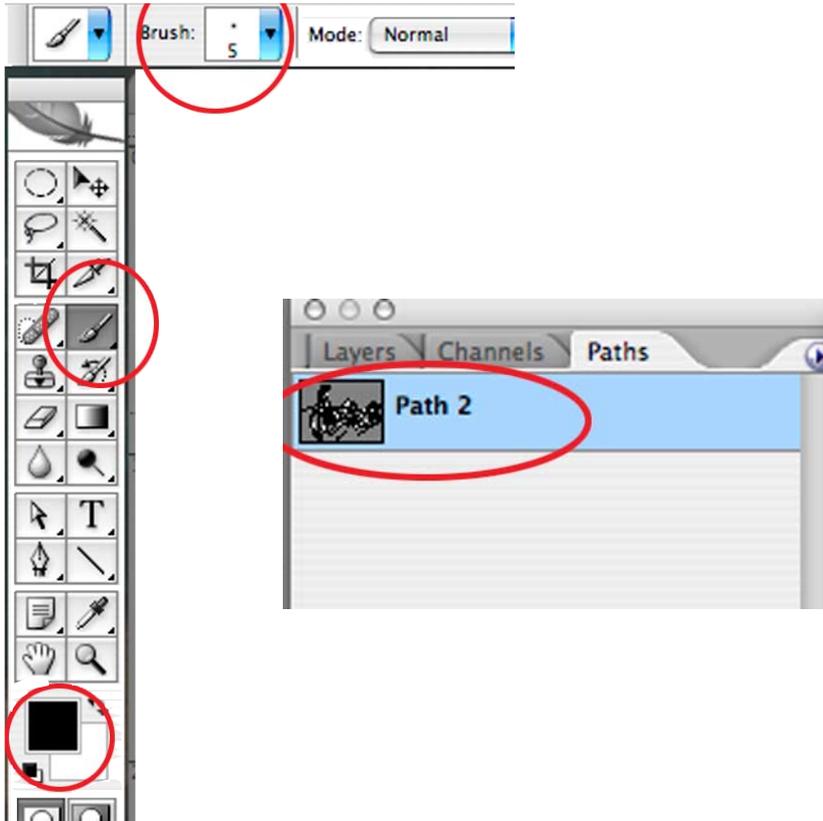
When drawing clothing it is frequently useful to include some of the folds and wrinkles in the clothing.



When you want draw a curve, say the end of finger, it's best not to add a point at the high point of the curve, but instead put points on each side of it, and use the handles to shape the curve.

Stroking Paths in Photoshop 1

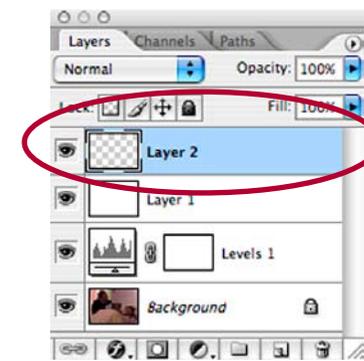
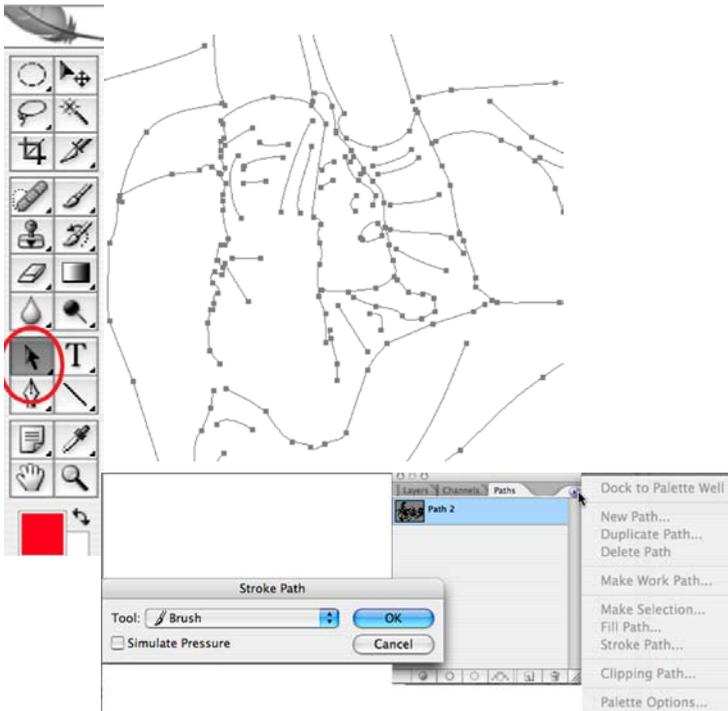
Paths themselves are invisible. To make them visible you have to **Stroke** them. There are 2 ways to do this, one in **Photoshop** itself, and another in **Illustrator**.



Photoshop:

- 1) Make sure you have an **empty layer** to write your strokes.
- 2) Select the **Brush Tool** with **Black** as a **Color** and a **Brush Width** of say 5 pixels (do Experiment with the width).
- 3) Select the **Path** in the **Paths** Palette.

Stroking Paths in Photoshop 2



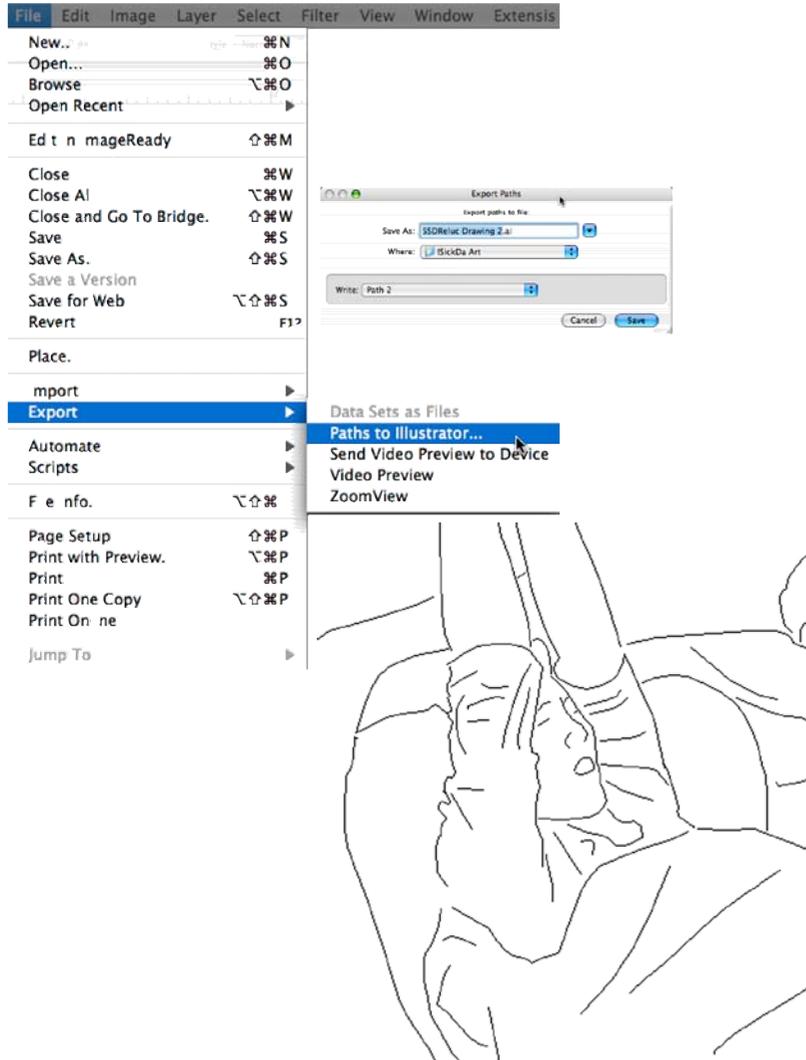
Photoshop:

Aftering **Selecting the Path in the Paths Palette.**

- 4) **Select the Paths in the Drawing with the Path Selection Tool.**
- 5) **Stroke the path**, either from the pull down menu on the right of the palette, or with the button like an empty circle at the bottom of the palette.
- 6) **Save this as a Photoshop PSD file** (to maintain layers etc.), then **Flatten it and Save the Stroked Image as a Tiff** to put in InDesign.

Stroking Paths in Illustrator

I prefer to stroke paths in *Illustrator* which is included in Adobe's *Creative Suite*) because you have more control..



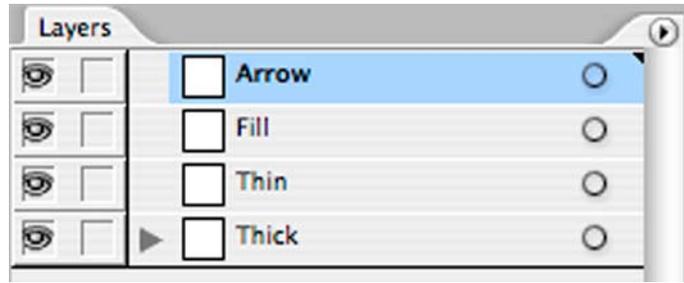
Illustrator

- 1) Export the paths to *Illustrator* (you will be given a choice for Path Names to export).
 - 2) Open *Illustrator*
 - 3) Open this File in *Illustrator*.
When the file opens it will be blank.
- This is because none of the paths have yet been stroked or filled.
- 4) Hit Command Y to view the paths in Outline View.



Stroking Paths in Illustrator

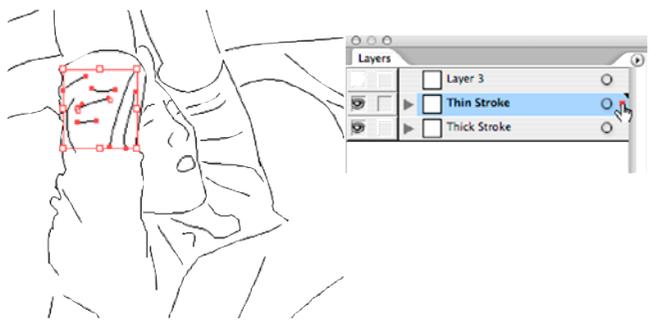
One advantage of working in *Illustrator* is that you can easily make some lines thicker than others. For example you might want the outline of the face to have thicker, bolder lines that the eyes, or the outline of a piece of clothing to bolder (thicker) than the wrinkles within.



1) In the Illustrator Layers palette make a set of layers (created from the bottom up):

← Thick, Thin, Fill, Arrow

You can rename the original layer Thick stroke. Initially it will contain all of the paths in the file.



You can create an **Action** from the **Actions Palette** to make all these layers. When you play it you may have to hit Return at each layer.

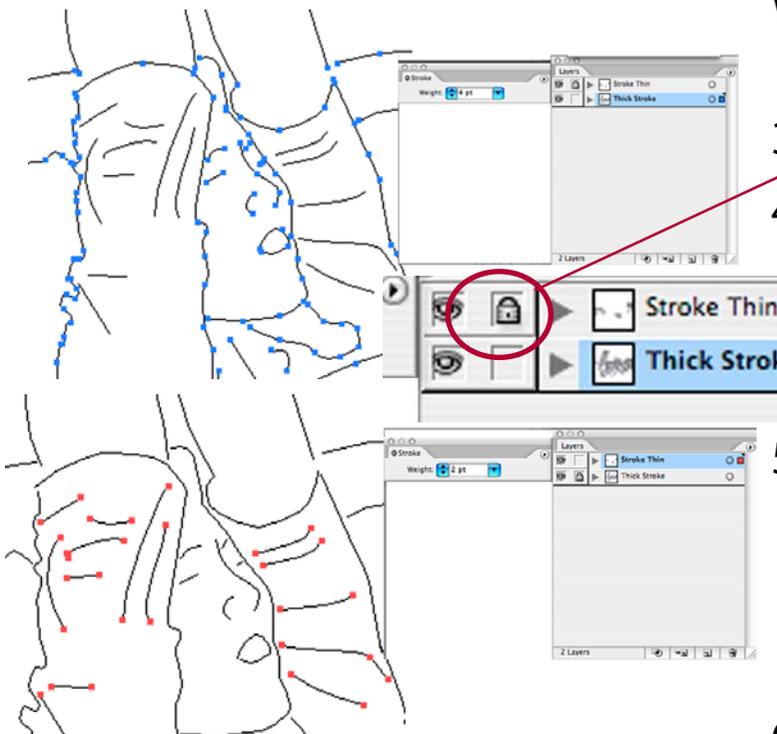
2) Using the **Selection Tool** (top left on the left tool bar) **move all the paths you want to be thin to the Thin Stroke Layer.**

Stroking Paths in Illustrator



When you've moved all the thin paths to that layer

- 3) Lock the Thin Layer.
- 4) Go to the Thick Layer, use Command A to Select All Paths and then give them a Black Stroke of say 4 points (Experiment)
- 5) Now give all the paths in the Thin Layer a stroke of 2 Points
(Lock the Thick layer; Select All in the Thin Layer)
- 6) Hit Command Y to go to Preview View, and see the drawing will all of its stroked paths.
- 7) Save this file to Place in your InDesign Transcript (you may get something about Converted in the Save Box -- Ignore it)



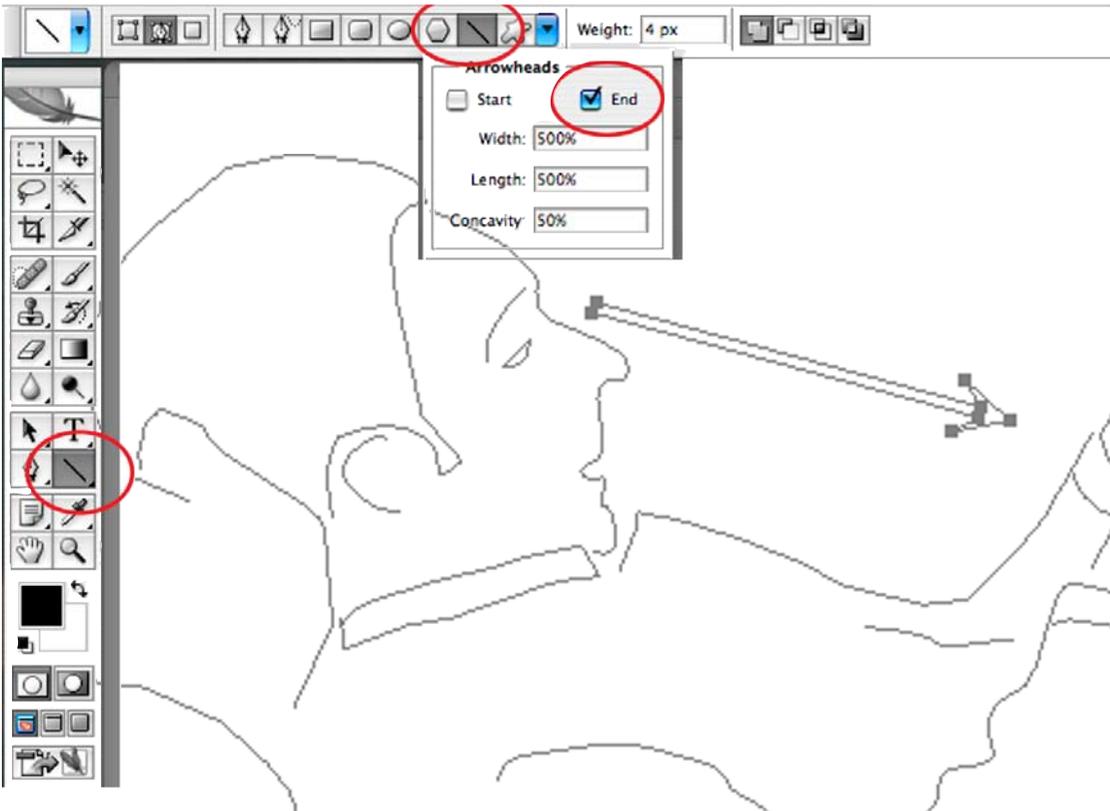
Adding Arrows



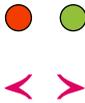
Arrows are extremely useful. You can add them either when you are drawing paths in Photoshop or later in Illustrator.

•Photoshop

Choose the line tool from the left toolbar. In the options on the top toolbar chose the end(s) of the line where you want arrowheads:



Eventually you will want to **Fill** the arrow shape



Adding Arrows Illustrator

Draw a path (the shaft of your arrow) with either the Pen Tool or the Line Tool.

With the path selected choose **Effect -> Stylize -> Add Arrowheads**. A box will appear allowing you to chose what end(s) of the line you want. You control the size of the arrowhead with the **Scale** at the bottom of the box. You can adjust the arrowhead later from the **Appearance Palette** where it appears as an **Effect**.

DON'T add arrowheads from the Filter menu. The Arrowhead won't appear as an effet in the Appearance menu for later adjustment.

