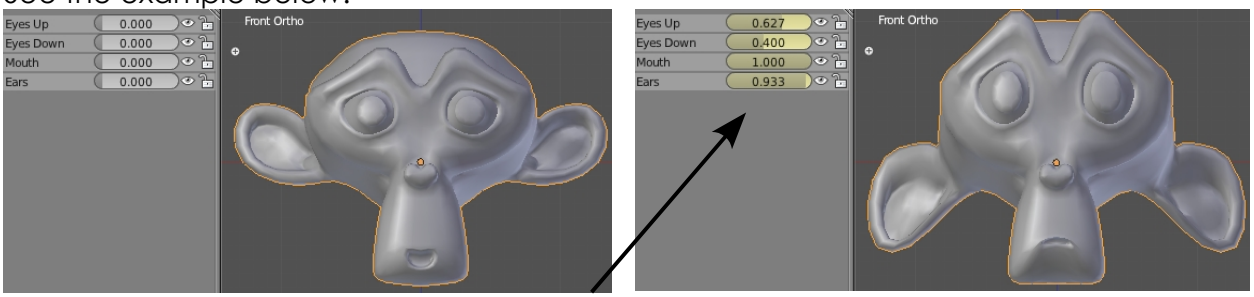
Chapter 17- Mesh Shape Keys

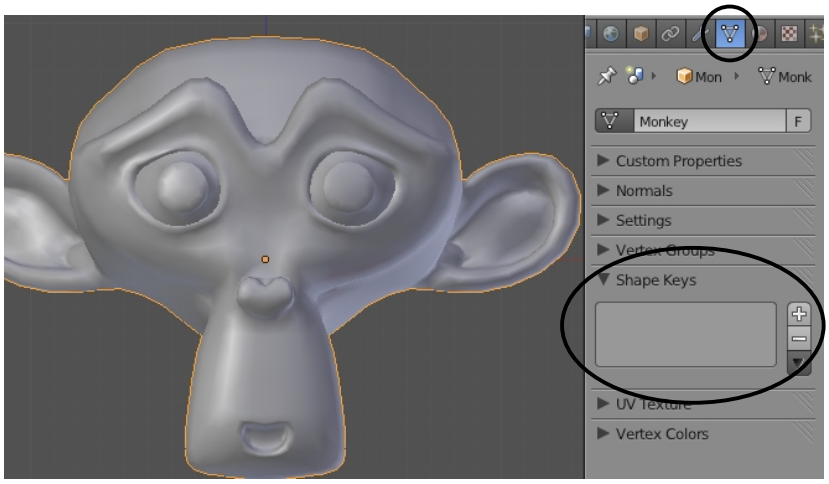
Creating Mesh Shape Keys

We've discussed deforming a mesh with an armature, but what if you want to deform a mesh in other ways like have it flatten, move a mouth, blink an eye, etc. and have a way of repeating that motion whenever needed? Some of these things can be done with armatures, but sometimes it's easier to set up a ***slider*** that at one end, represents the mesh in one form, and at the other end of the slider, shows the mesh fully deformed. See the example below:



Mesh deformation using *Shape Key* sliders *(called vertex editing in older Blender)* in the *Dope Sheet Window* can be a difficult process because it requires you to shape your mesh in edit mode moving verticies. With practice, this can become a worthwhile tool that will enable you to make quick and high-quality animation like the professionals do. If you notice in the above example, there are several sliders that cause different motions. By using combinations of them, a wide variety of motions can be produced *(for example, Eyes Up/Down will combine the motions)*. These are great tools for making a character speak, blink and show expression.

In order to start using shape keys, we'll start a new scene, delete the initial cube, then add a *Monkey* head from the *Mesh* menu. To make the monkey head look better, we'll hit "*Smooth*" in the *Tool Shelf* and add a "*Subdivision Surface*" modifier from the *Modifier* panel. I have also rotated the monkey head to be facing forward in the *Front View* in *Ortho* mode. Now, find the "*Shape Keys*" panel in the *Object Data* buttons.



In order to start using shape keys, press the "**+**" in the *Shape Keys* panel to add a "*Basis*" group to add keys under. This "*Basis*" is not an actual key, but contains all the keys you now create under it. This can also be renamed.

In order to add your 1st slider, press the "**+**" button again. You will have another key show up under the *Basis* called "*Key 1*". It's a good idea to rename these keys to something matching the motion that you plan to create. A good facial animation could contain dozens of slider!