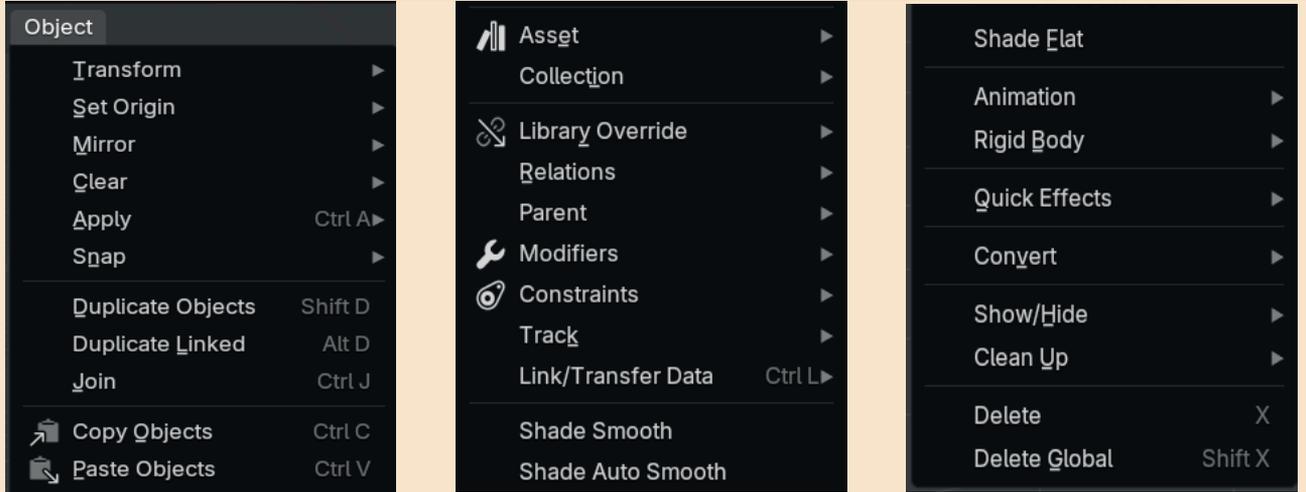


The Object Menu

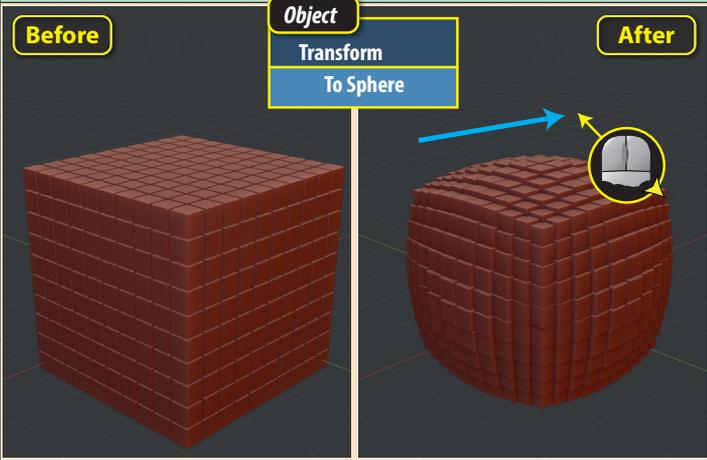
By far the largest of the *Object Mode menus* is **Object**. It is made even more complex by the fact that most of its entries have submenus of their own. Because of its length, the representation of the **Object** menu is artificially split into three columns in the image below.



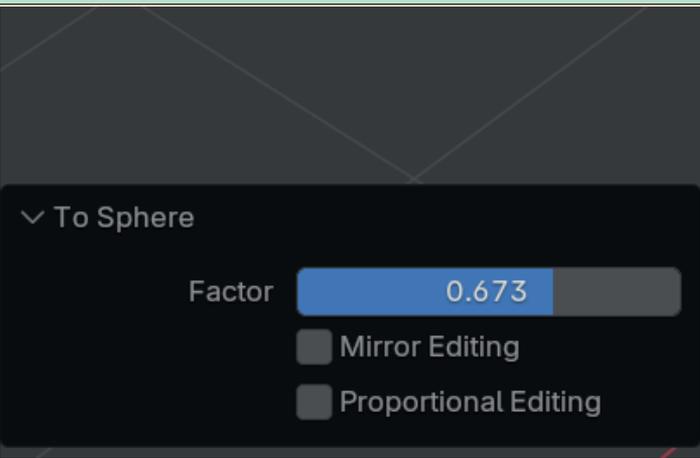
Transform's submenu is also long, but we can ignore Move, Rotate and Scale, since we've already covered those operations.



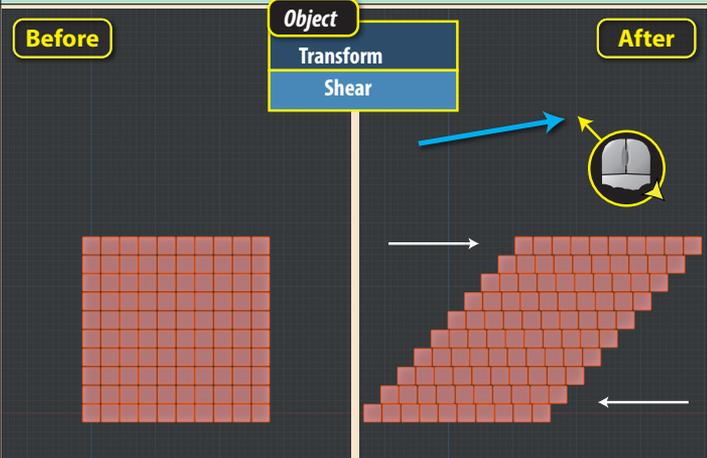
To Sphere is an operation that only works if it is being applied to a large collection of objects. It attempts to reposition the selected objects into a spherical distribution. The degree to which this is achieved is controlled by moving the mouse.



The **Last Op panel** has three parameters but only **Factor** is relevant at this stage. **Factor** is an alternative to dragging the mouse. Its value determines to what extent the object are reorganised with 1.00 being maximum spherification.



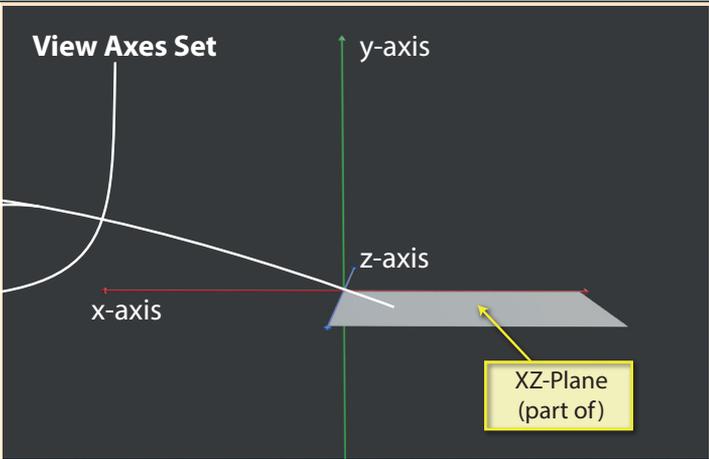
Shear slides parallel objects past each other with one half of the objects moving in one direction while the other half move in the opposite direction.



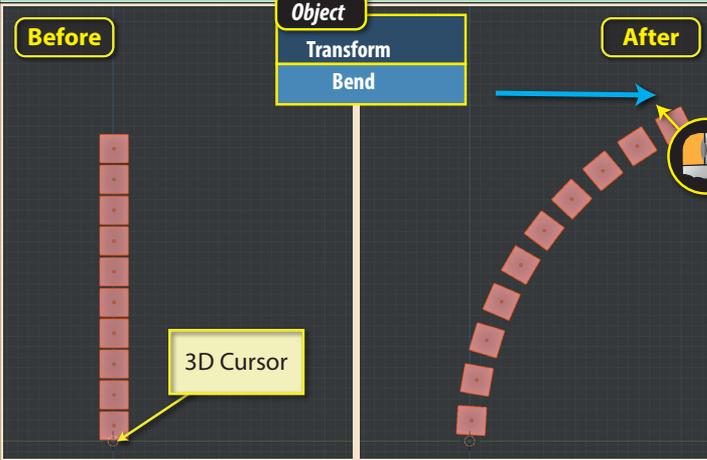
The **Last Op panel** has several parameters. **Offset** determines the amount and direction of shear created. **Axis** and **Ortho Axis** together define the plane of the shearing. **Orientation** specifies the axes set of the plane.



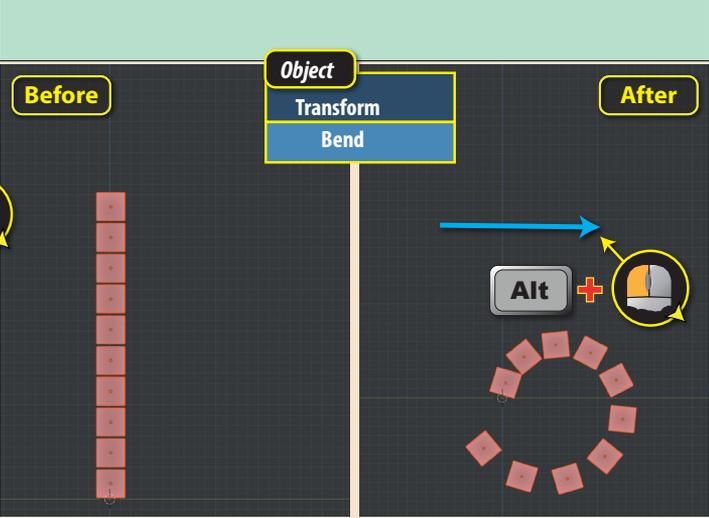
Remember the View axes set has the z-axis perpendicular to the surface of the screen so the XZ-plane is edge-on to the x-axis. In the image below the viewpoint is shifted slightly to better see the plane defined in the Last Op panel.



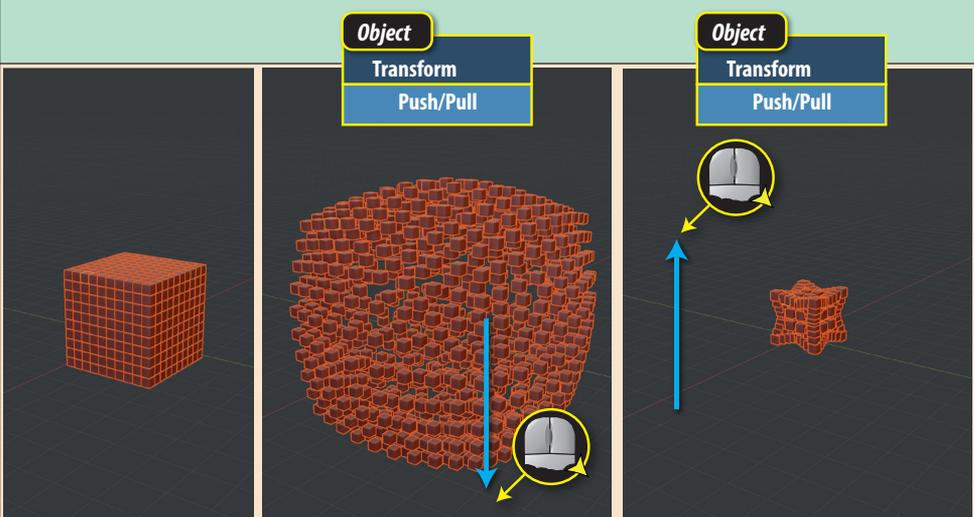
Bend repositions the selected group of objects to create a bending effect. The characteristics of the bend depend on the position of the 3D cursor and the mouse pointer. Moving the mouse pointer determines the extent of the bending effect.



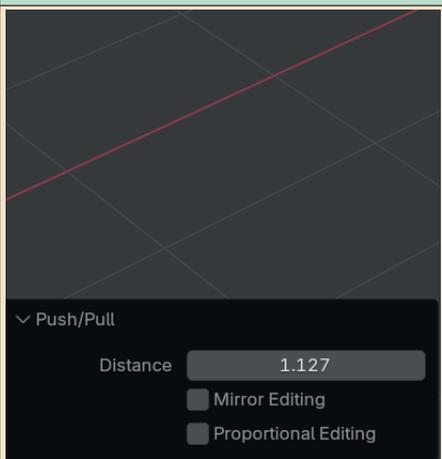
By holding down the **Alt** key after dragging has started, we can create a circular bend.



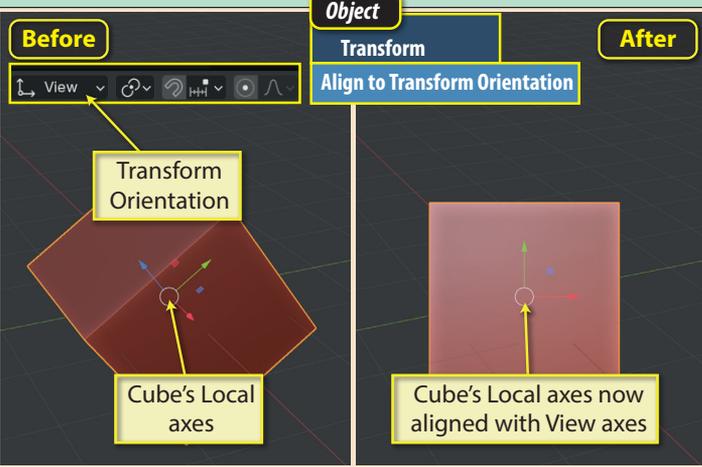
Push/Pull expands or contracts the positioning of the selected objects. Move the mouse down to expand and up to contract.



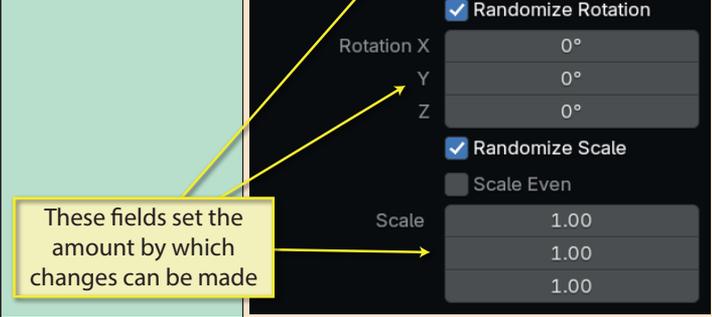
The **Last Op panel** has a **Distance** parameter which affects the expansion/contraction. Negative value expand; positive values contract.



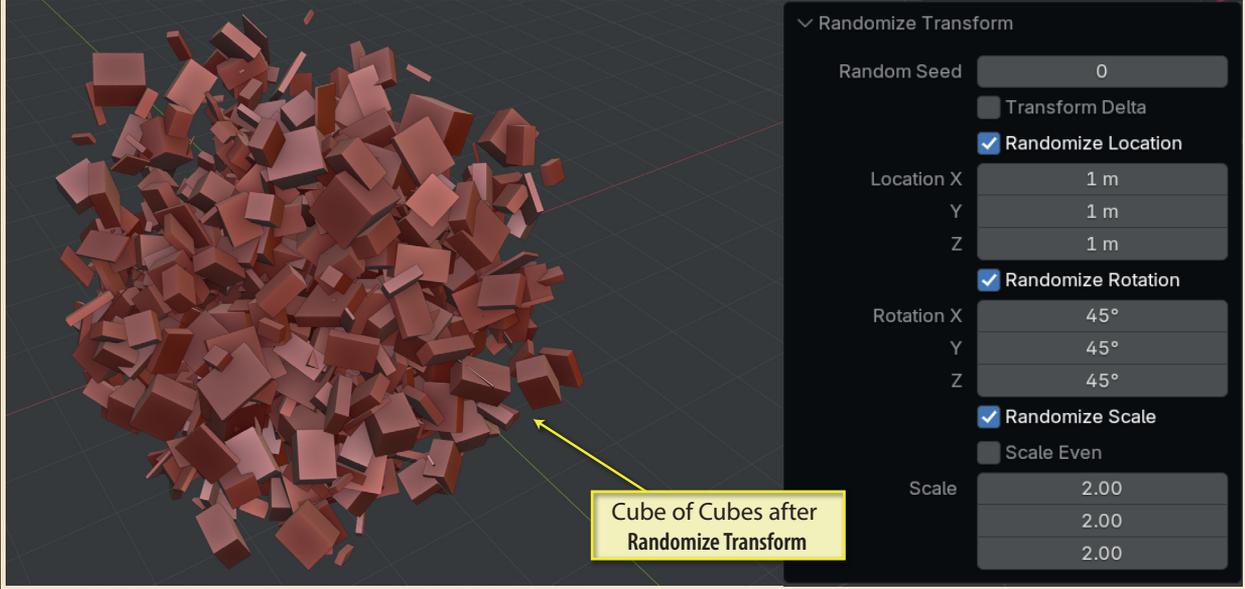
Align to Transform Orientation adjusts the orientation of the selected object so that its *Local axes* align with the axes set selected in the **Transform Orientation** field at the top of the **3D Viewport**.



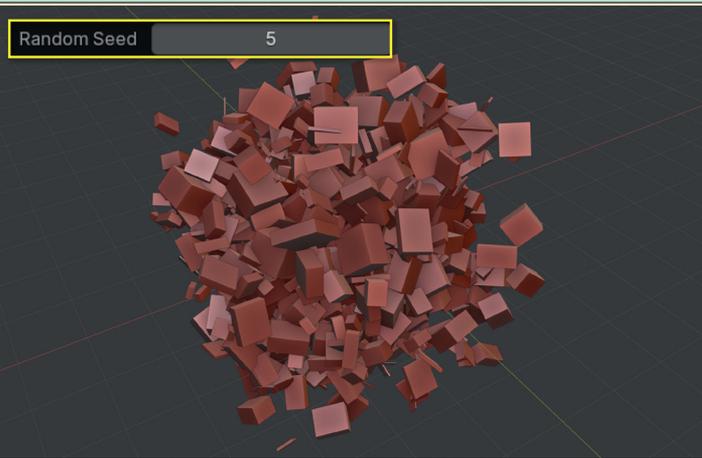
Randomize Transform adjusts the rotation, location and scale of every selected object randomly. All of the controls for this operation are in the **Last Op panel**.



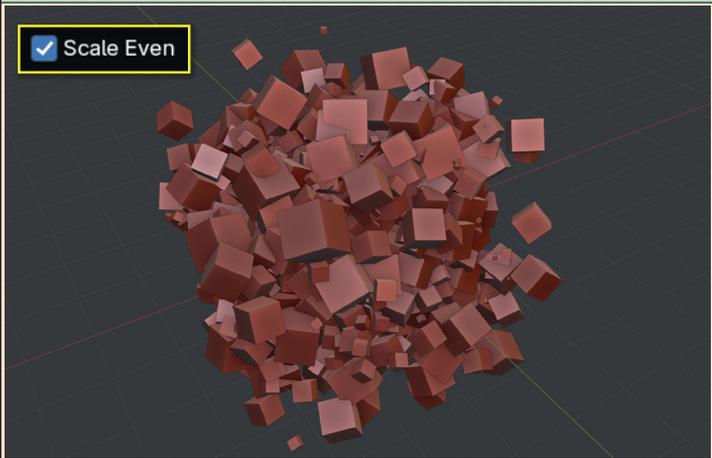
After selecting this option, adjust the **Last Op** parameters and the objects will move, rotate and resize randomly with the specified limits.



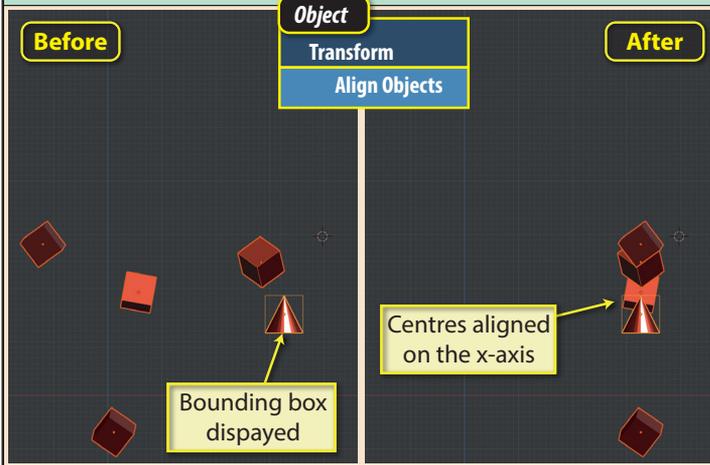
Random Seed's value affects the random values generated by Blender. A change of value will result in a different random pattern.



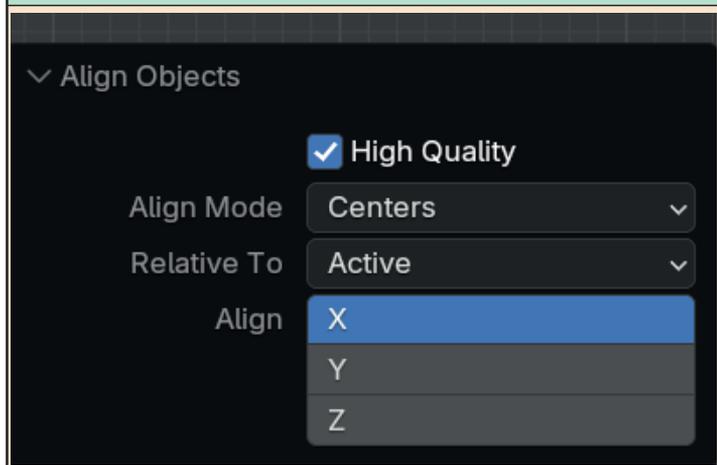
Scale Even, when checked, scales each object by a random, but equal amount in all directions.



Align Objects repositions the selected objects into a straight line. In the example below we start with four Cubes and a Cone all of which are selected. After performing **Align Objects**, the objects are placed in a straight line.



Exactly how the objects are aligned is dependent on the settings in the *Last Op panel*.



High Quality, when checked uses a more accurate algorithm to calculate the new positions of the selected objects.

Align Mode determines which part of the selected objects are to align. There are three options:

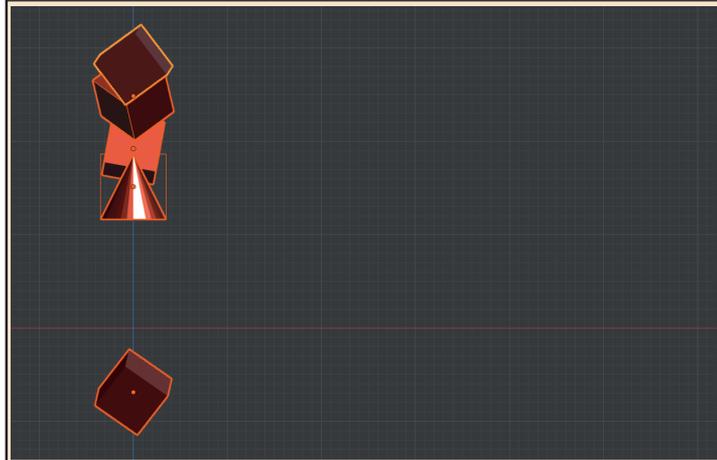
- Centers** - the objects' centres are aligned
- Negative Sides** - the negative side of the bounding boxes
- Positive Sides** - the positive side of the bounding boxes

Relative To specifies the position of the alignment. There are four options:

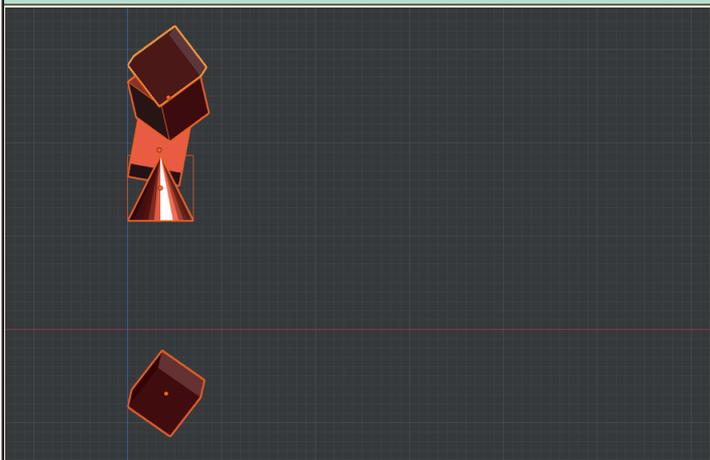
- Active** - the active object
- Scene Origin** - the World origin
- 3D Cursor** - the position of the 3D cursor
- Selection** - the average of the centres of the selected objects

Align specifies which axes the selected objects align along.

Below, **Relative To** has been changed to *Scene Origin*.



Below, **Align Mode** has been changed to *Negative Sides*.



Below, **Align Mode** has been changed to *Positive Sides*.

