Pro Align Tools Documentation
Release 2.1

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General

PRO ALIGN TOOLS

Alignment Addon for Blender

This manual is for the addon in the latest version of Blender. Looking for the old manual of Blender 2.79? Go here!

Installation

1.1 Installing for Blender 2.8x (for newer versions of Pro Align Tools)

- Go to Edit > **Preferences**

- Go to the **Add-ons** section

- Press the **Install. . .** button from the top right

- Navigate through your filesystem until you find the **Pro Align Tools** addon and select it: **pro_align_tools_2_82.zip**

- Press the **Install Add-on from File. . .** button. You should now be able to see it listed in the addons list

- Press the little empty **checkbox** next to the addon name in order to enable it

- In the bottom left corner of the Preferences window, look for the **Save & Load** button with a collapsed menu icon (the one with three horizontal lines) and click it to open the Save & Load Menu

- If you have the **Auto-Save Preferences** checkbox enabled, you can just close the Preferences window, and once you reopen Blender, **Pro Align Tools** will continue to be available in future executions. On the other hand, if you have the **Auto-Save Preferences** checkbox disabled, you will have to click the **Save Preferences** button from the Save & Load Menu to ensure that **Pro Align Tools** remain available in future executions of Blender

- Enjoy!

Frequent Questions

2.1 When using an older 2.8 version of Pro Align Tools (pro_align_tools_2_8.zip), I can't see the Align tool icon in the Toolbar. What can I do to solve this problem?

The 2.80 version of the script had to copy a special icon in the Blender installation directory.

Sometimes the user don't have permission to copy files into that directory. This is why, when failing to do so, the icon looks missing with a NONE placeholder icon.

The first time, you should launch Blender with administration rights and do the installation normally.

If you installed the addon previously, it's recommended to first remove the addon and then, after reinstallation and activation, your icon should appear visible in the toolbar.

Next executions of Blender won't require administration rights, so you can launch normally.

The most recent versions of Pro Align Tools don't have this problem anymore.

2.2 What can I do when I need to select an object behind a gizmo?

You can approach this problem in 3 ways:

- The most obvious is to zoom in/out and avoid the cursor being on top of any gizmo, then selecting your geometry as usual.

- If you prefer to select objects with the **Left Click**, you can temporary use the shortcut **D** in the 3D View to turn off the drawing of gizmos. Then you can perform all your actions as usual without worrying about clicking on any gizmo. When you are done selecting your objects, you can re-enable the drawing of gizmos by using the same shortcut.

- If you prefer to select objects with the **Right Click**, you can take advantage of the fact that with this workflow, selection and action are bound to different buttons, and this way they never conflict each other. The action on gizmos is always on **Left Click** while selection happens on **Right Click**.

Introduction

3.1 Accessing the Tool

You can easily access the Tool both in Object and Edit Modes, from the 3D View, by clicking over the **Align** icon in the Toolbar (**T**).

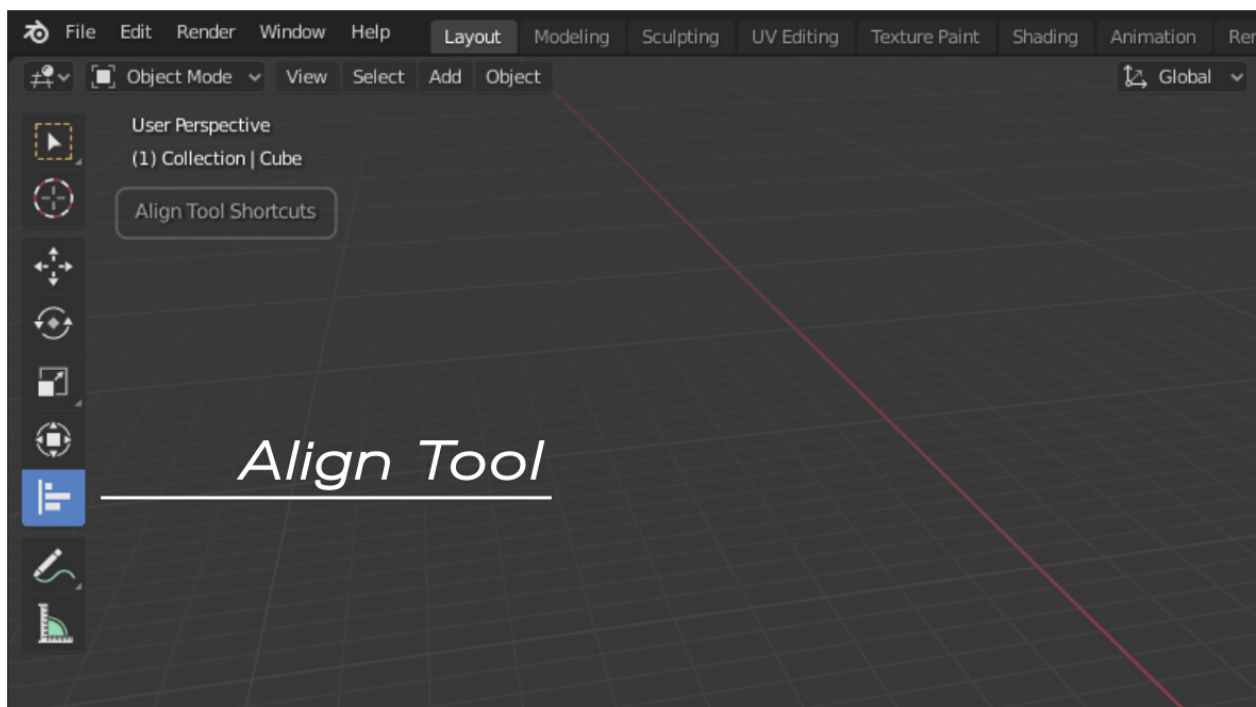You can also access the Tool by using its shortcut: **Ctrl + Alt + A**

Fig. 1: Press this button in the Toolbar to select the Align Tool.

3.2 Sidebar panel

The main panel of **Pro Align Tools** can be found at the Sidebar (**N**), within the **Tool** tab. You have different options in this Sidebar whether you are in Object or Edit Modes. Pro Align Tools is mainly conceived to work in Object Mode, therefore alignments are performed in this mode only.
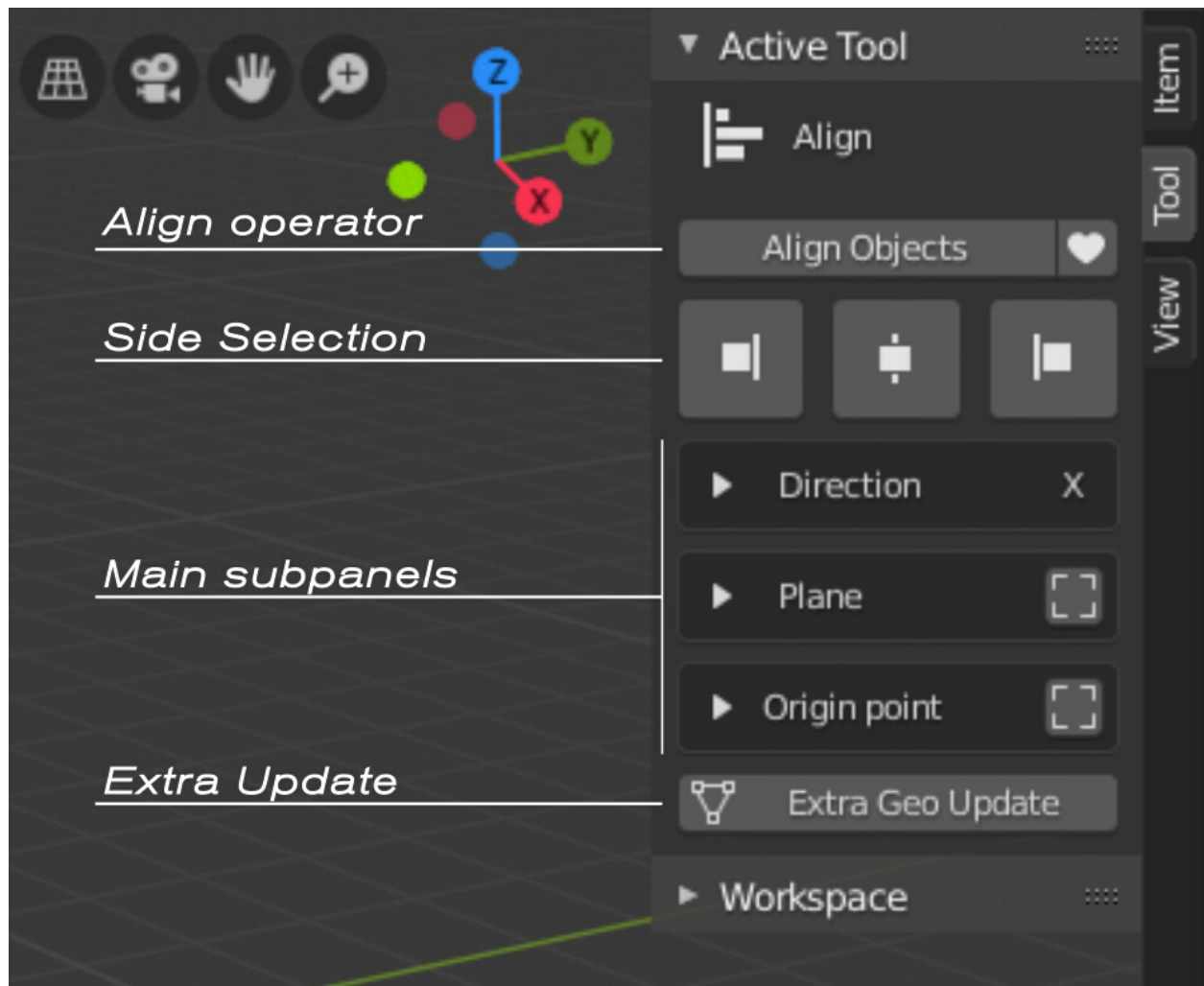
Fig. 2: Pro Align Tools panel in Object Mode.

When you have selected the Tool, you can align objects by just clicking the **Align Objects** button at the Sidebar, or by pressing the **Enter/Return** key. Pressing the button again applies the same operation repeatedly, which is useful to offset an object a bunch of times, when the alignment is relative to the current selection.

Note: If you cannot see the gizmos being drawn in the 3D View, make sure that the **Show Gizmos** button is not disabled in that view. You can easily turn this button on/off by pressing the shortcut **D**.
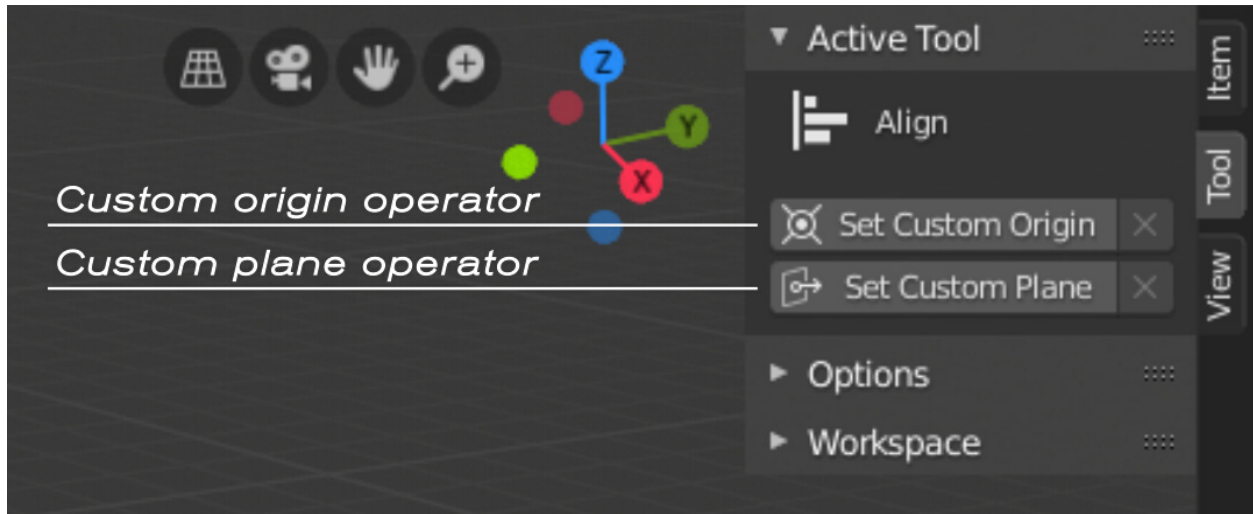
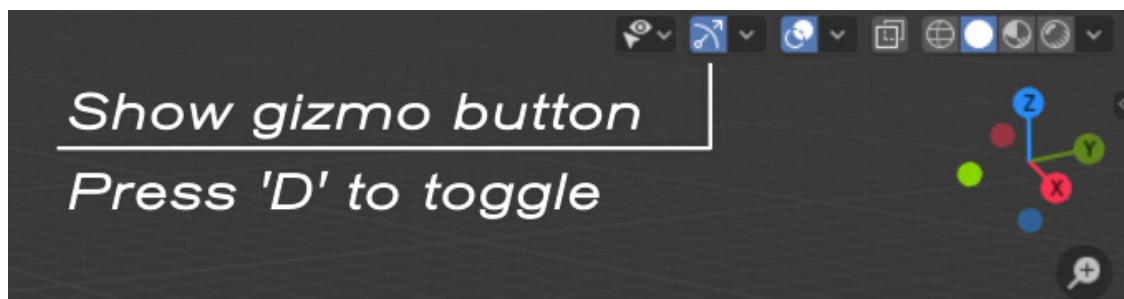Fig. 3: Pro Align Tools panel in Edit Mode.

Fig. 4: The default Show Gizmo button in the Blender UI.

3.3 Running the first time

The basis of **Pro Align Tools** is to define a projection Plane where the objects will perform their alignment. Objects then can align in different ways in relation to that projection Plane, opening a whole set of possibilities to align within 3D space.

The predetermined alignment of **Pro Align Tools** is just to align all selected objects to their minimum X in Global Coordinates. The default behaviour uses the geometry of objects, whose origin of displacement is picked up from a generated bound box that is perpendicular to the current plane.

This alignment is the equivalent of just clicking the positive X arrow of the leftmost gizmo from your current Selected objects (leftmost gizmo in the X axis as seen from the top view).

So, as a first exercise, just select some randomly placed objects. You should see a preview of the alignment showing you how will the objects move to align at the minimum X of the selected objects' bound box. If you press **Enter/Return**, your objects will align.

You can move, rotate and scale the objects all you want while the preview runs in realtime.

To better see what's going on, enable the little **bounding box button** next to the **Origin point** panel at the Sidebar (**N**). This allows you to see the considered bound box that is being used while your alignment is taking place.

Now you can see that your objects have a bound box from where the origin of the translation is being picked up.

To switch fast between the levels of alignment relative to the plane, use the **Alignment depth** buttons on top. This is just a predefined configuration of alignment that automatically takes the origin point on your object to make it go to one side or its opposite in relation to the projection Plane.

As you can see, your objects get aligned to the other side of the projection Plane, and the origin points from where the translations were being taken, had moved from one side of the bound box to the other.

Try the centered alignment.

Now the origin points have moved to the center of the bounding boxes.

Confirm the alignment by pressing the **Align Objects** button at the top of the Sidebar (**N**), or by just pressing the **Enter/Return** key.

Your objects move to their final position, and the alignment preview is updated, showing a new alignment possible, relative to the selected objects.
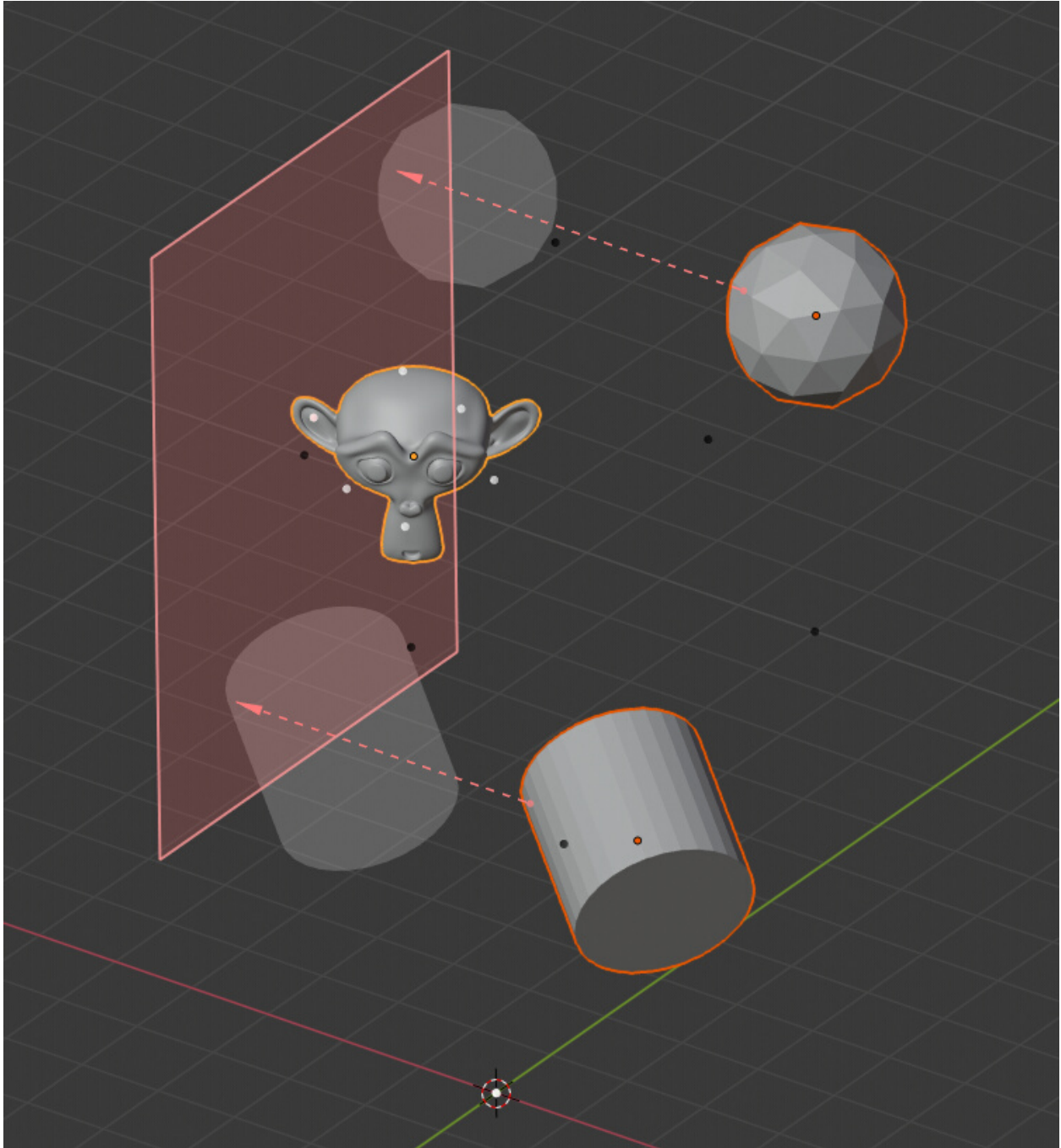
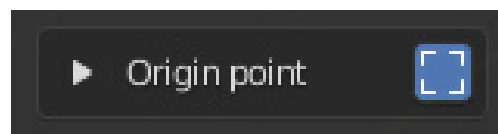Fig. 5: The default behaviour of Pro Align Tools.

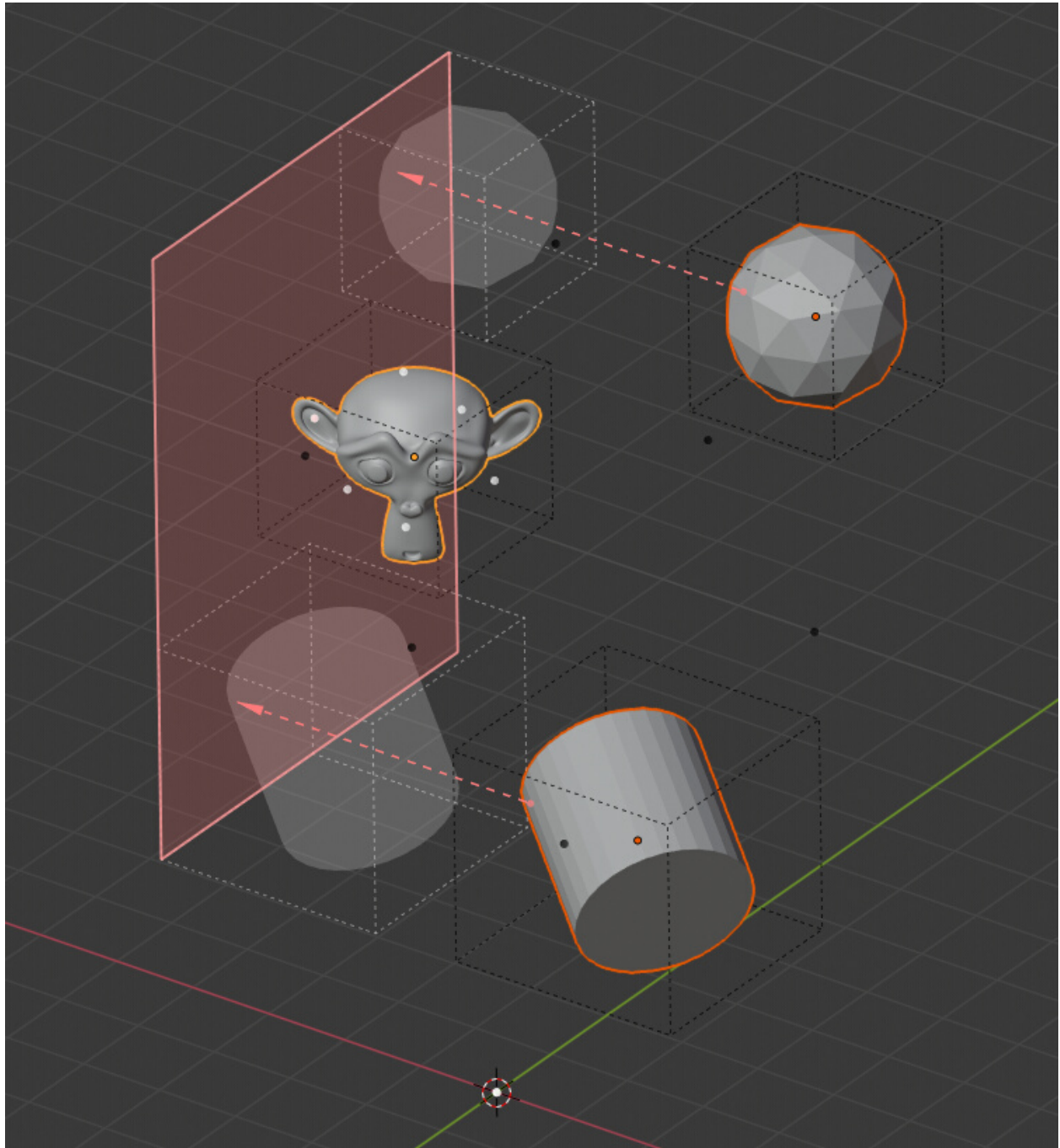Fig. 6: Enabling the drawing of bounding boxes for objects.

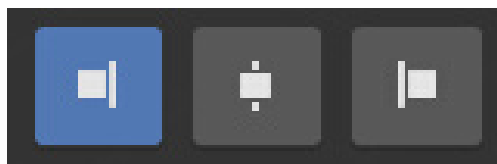Fig. 7: The bound box helps to understand how is the alignment being performed.

Fig. 8: Align your object to the 'left' (negative direction of the current plane)
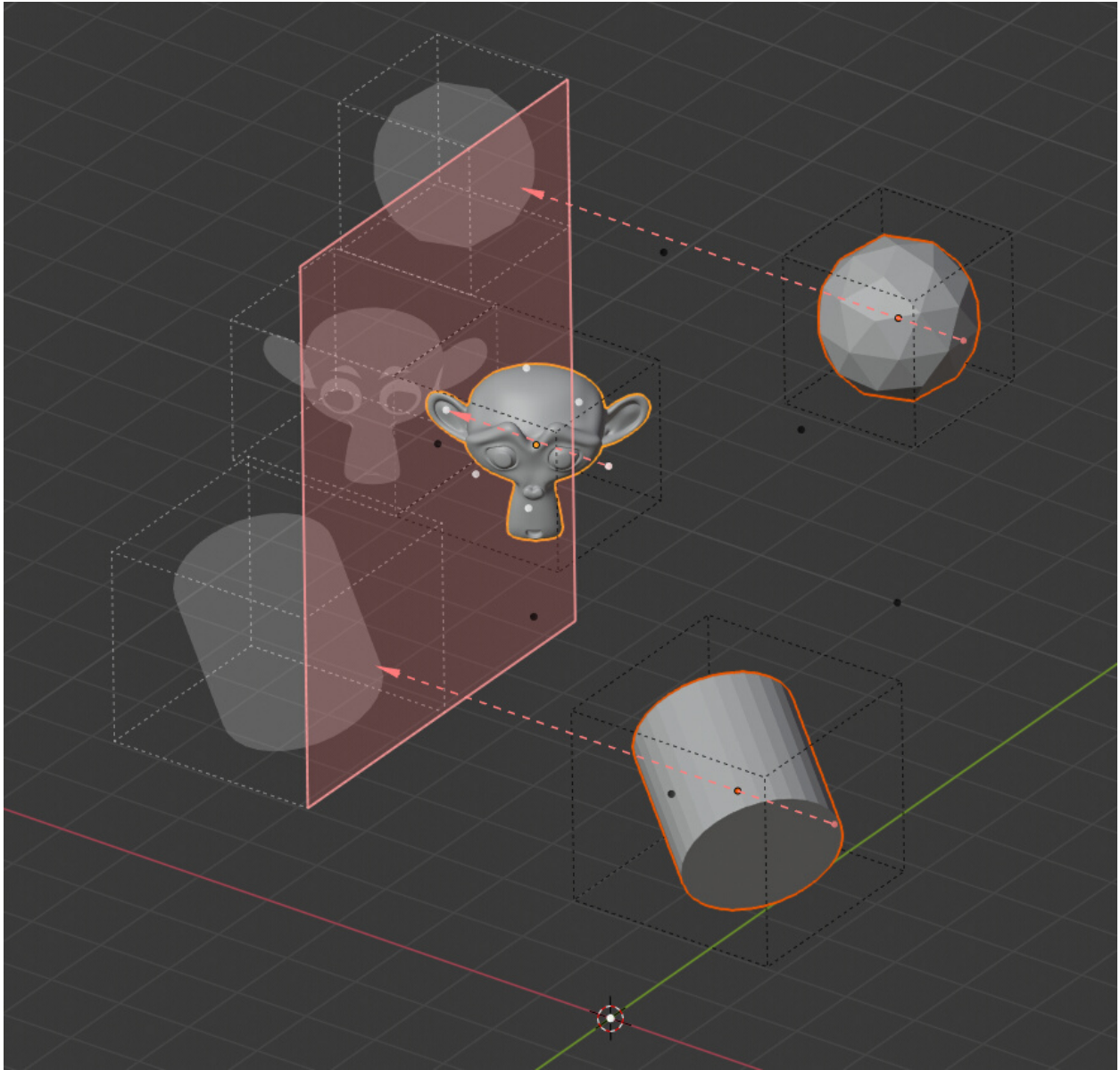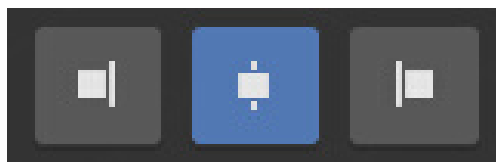
Fig. 9: The alignment has changed.
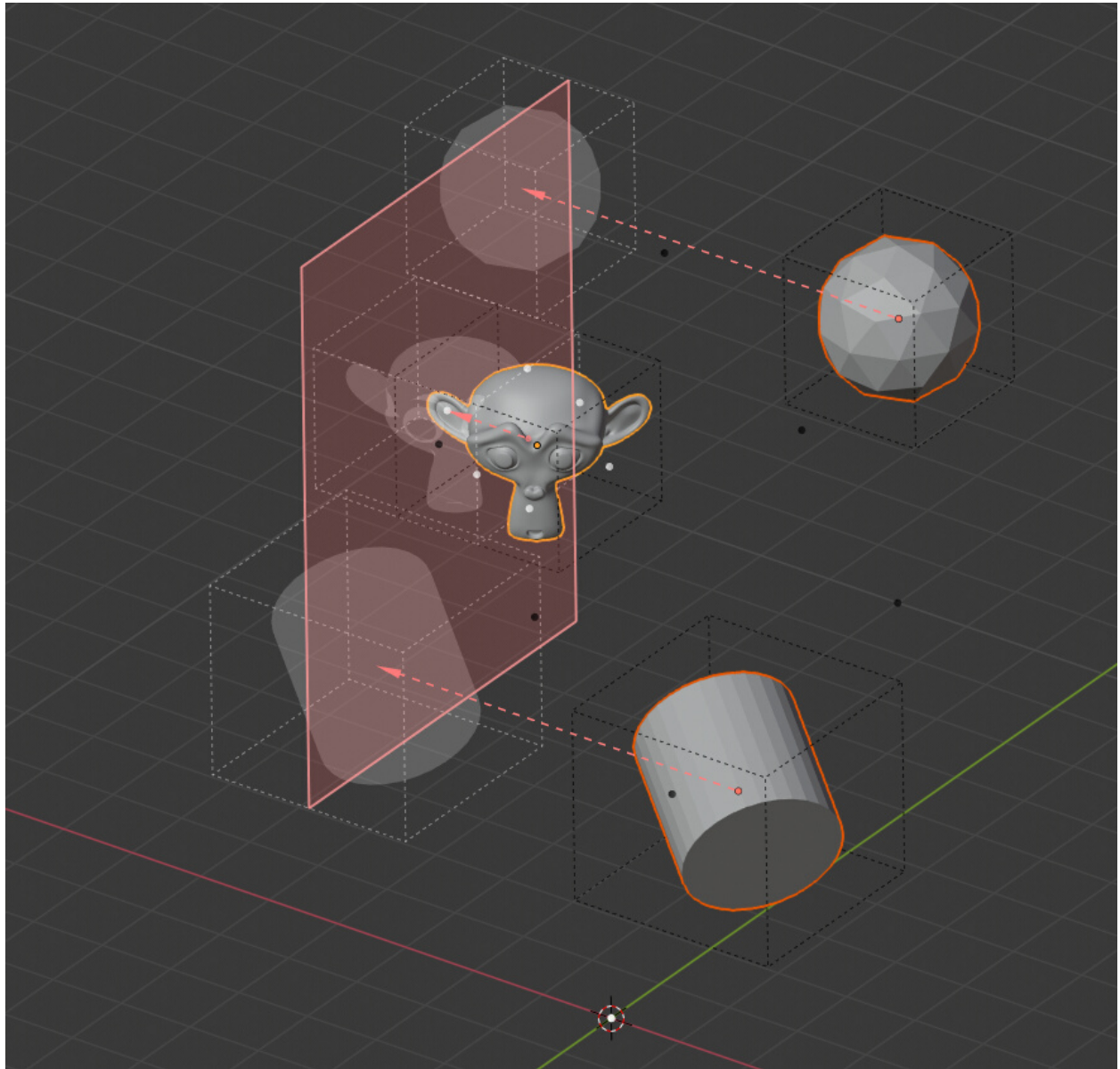

Fig. 10: The preset for a centered alignment.

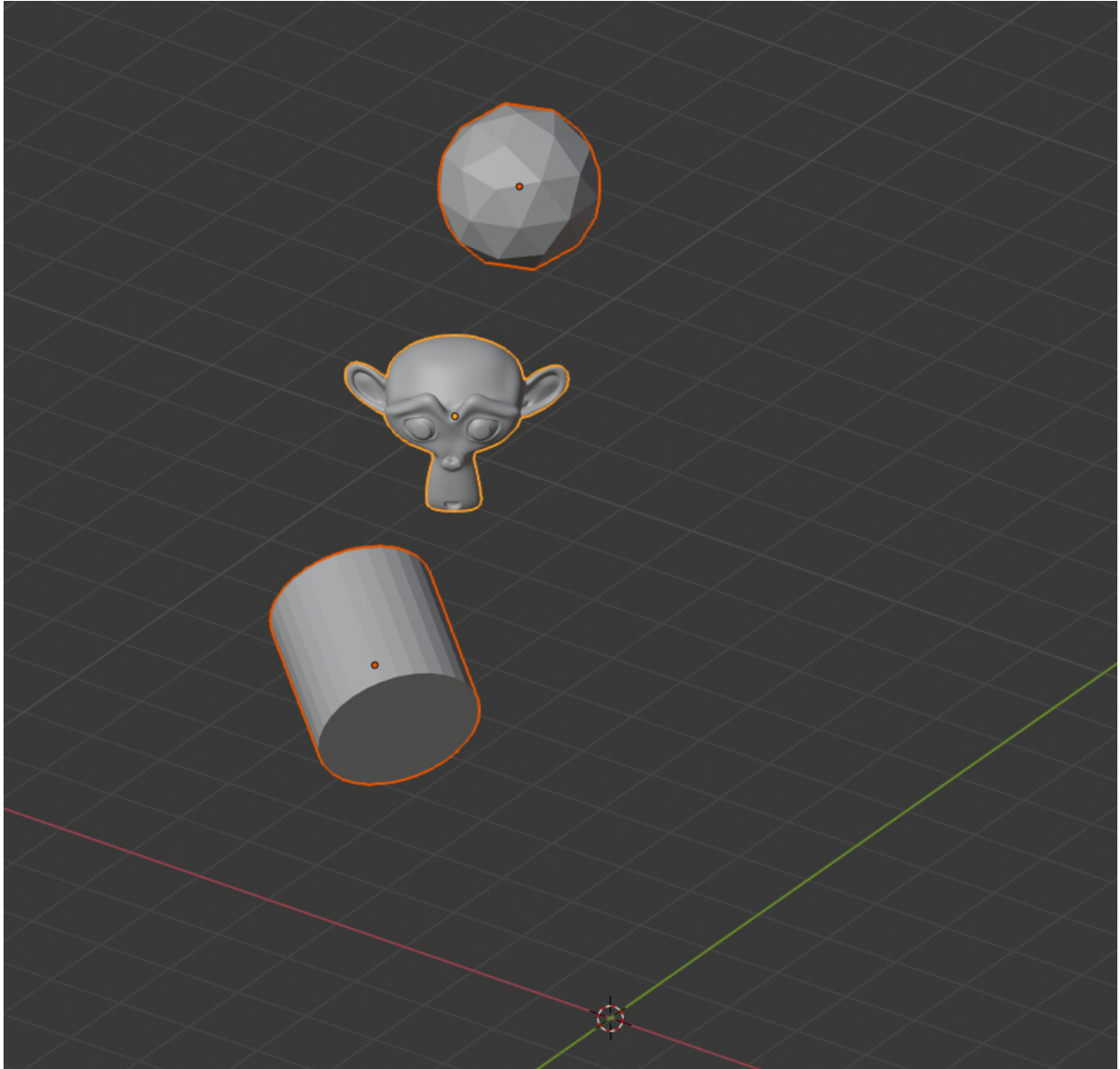Fig. 11: The objects are now centered on the plane.

Fig. 12: The objects have been aligned to the Plane.

When the next alignment allow objects to move, you will see the projection Plane moving to a different position of alignment, otherwise you will only see the projection Plane in the same place and no arrows, as the objects have reached to a static no-move point.

As you may have noticed, your last settings are remembered per session, that means that you can easily apply the same alignment to different selections of objects until you close Blender.

Overview

4.1 Auto-Alignment

4.1.1 Auto-Alignment mode

The predetermined mode of operation of **Pro Align Tools** is Auto-Alignment. This mode is a combination of settings, allowing to choose very fast an **Origin Point**, a **projection Plane**, a **Direction** of alignment, and the use of **local/global space**.

Auto-Alignment mode make use of some special gizmos which are a combination of 3 axes (X, Y, Z), each one providing up to 3 depths of alignment. In total, a single gizmo offers 9 unique alignments. When combined with a bound box, you are allowed to use up to 27 different alignments within the box.

The Auto-Alignment gizmos are also available for some special points like the origin of the world and the cursor.

Note: To actually see the gizmos in the 3D View, the **Show gizmo** button must be enabled for your current view. You can easily toggle this by pressing the shortcut **D**.

4.1.2 Global Space

Using an auto-alignment is easy as selecting the **Align** tool and **left clicking** over some arrow of a gizmo.

To do this now, just select some objects with volume in your scene, you may now notice that there are some **white** dots around the Active object. Those are the face centers of the bound box that surround the object, and they provide a base point where the alignment will occur.

The dots are **white** when they refer to the **Active** object, and **black** when they refer to your current **Selection** of objects. The black dots will not appear when you have only one object selected.

When the mouse cursor is close to some of the dots, the gizmo with the axes appear, along with the bound box representing the considered objects, also in **white** for the **Active** object and **black** for your current **Selection** of objects.
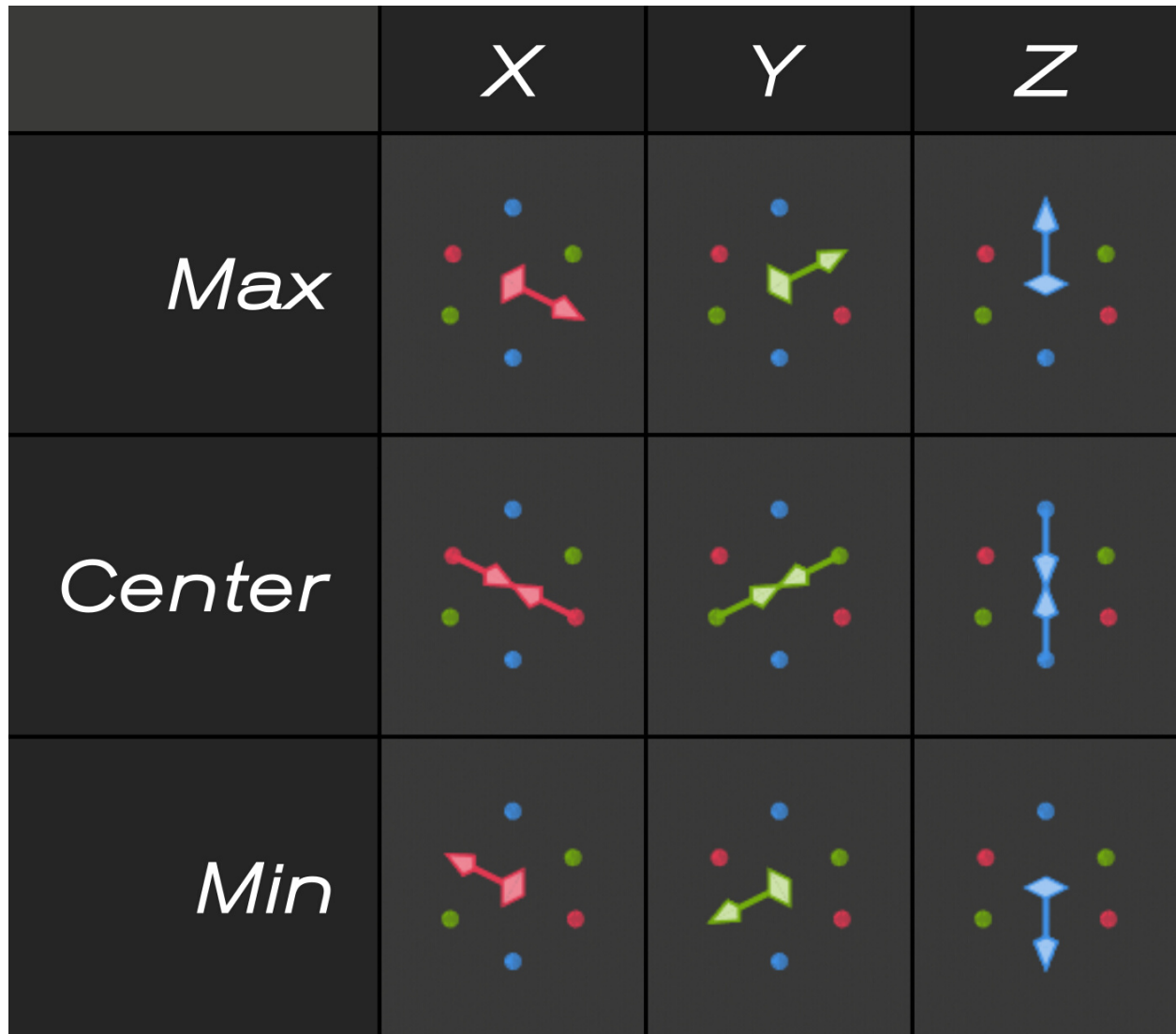
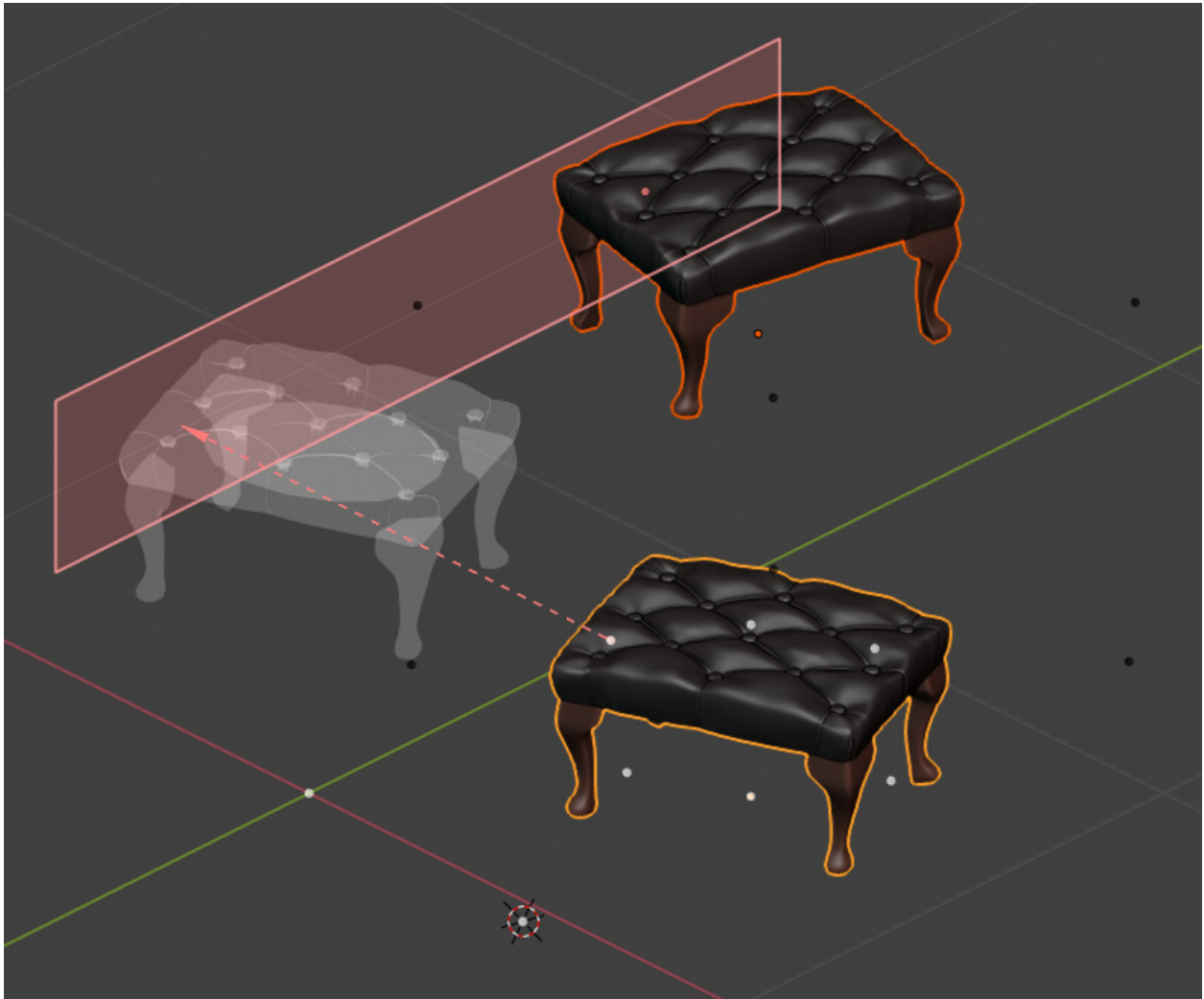Fig. 1: All the alignments provided by a single gizmo.

Fig. 2: The initial alignment. With 2 objects selected, white and black dots appear.

Now you will be able to point an arrow in the gizmo and do **left click** to select its predetermined alignment. This action replaces your current selection of origin point, projection plane, direction and local/global space.

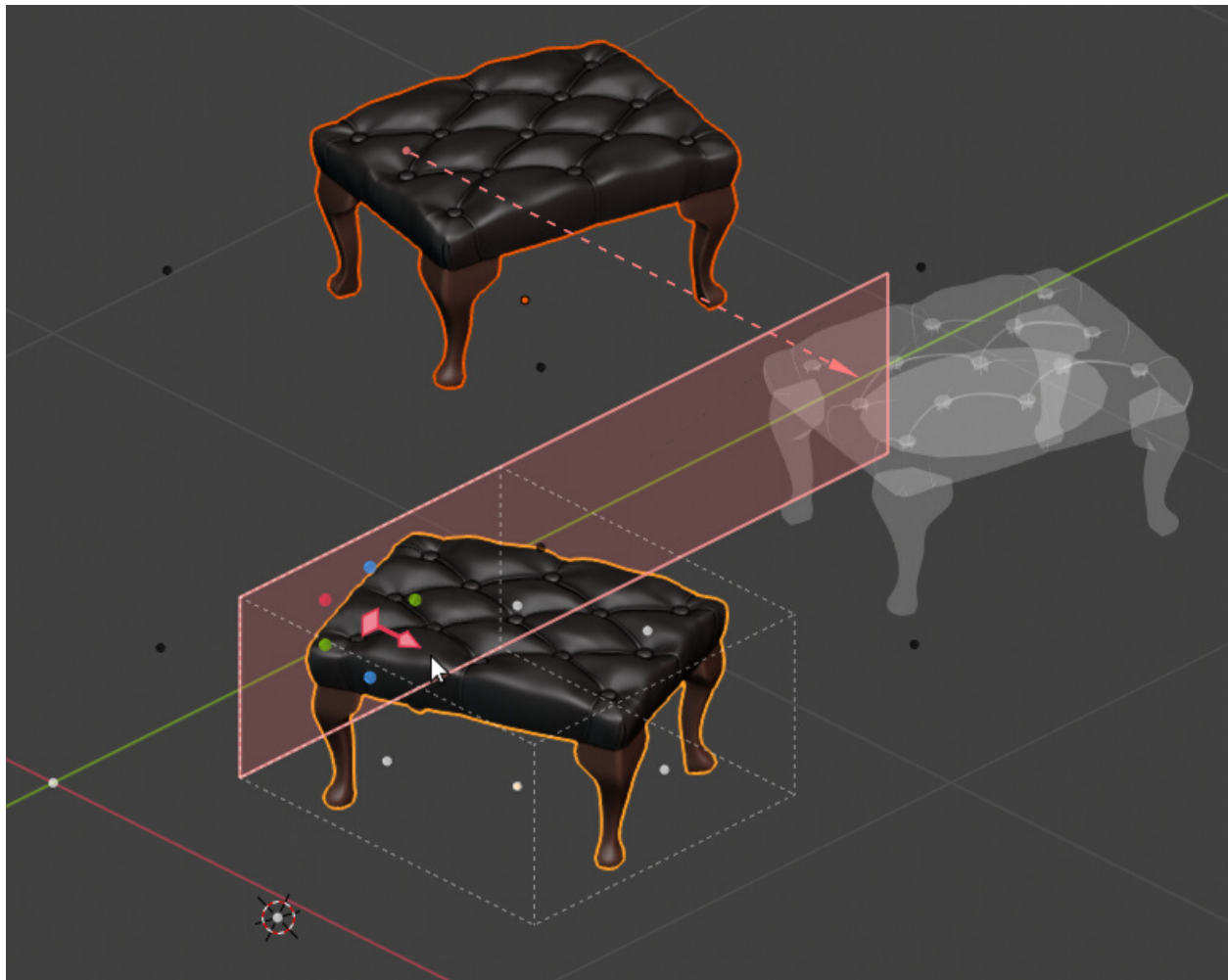Confirm the selected alignment with **Enter/Return** or by pressing the **Align Objects** button in the Sidebar (**N**).

Fig. 3: Clicking over one of the white dot gizmos. Hovering the cursor shows the associated bound box.

4.1.3 Local Space

To use the local space, hold the **Alt** key. This shows the gizmos oriented according to the local bound box of the Active object, and passing the cursor near the dots highlights the box with a **pink/magenta** color.

When multiple objects are selected while holding **Alt**, the **black** dots and their gizmos appear oriented according to the local space of the active object, but considering a new generated bound box that surrounds all objects. If you select another object with a different orientation making it the active one, you are able to use the local space of that object instead, relating to the same selection of objects, but with a different generated bound box, and therefore with its own set of alignment planes.
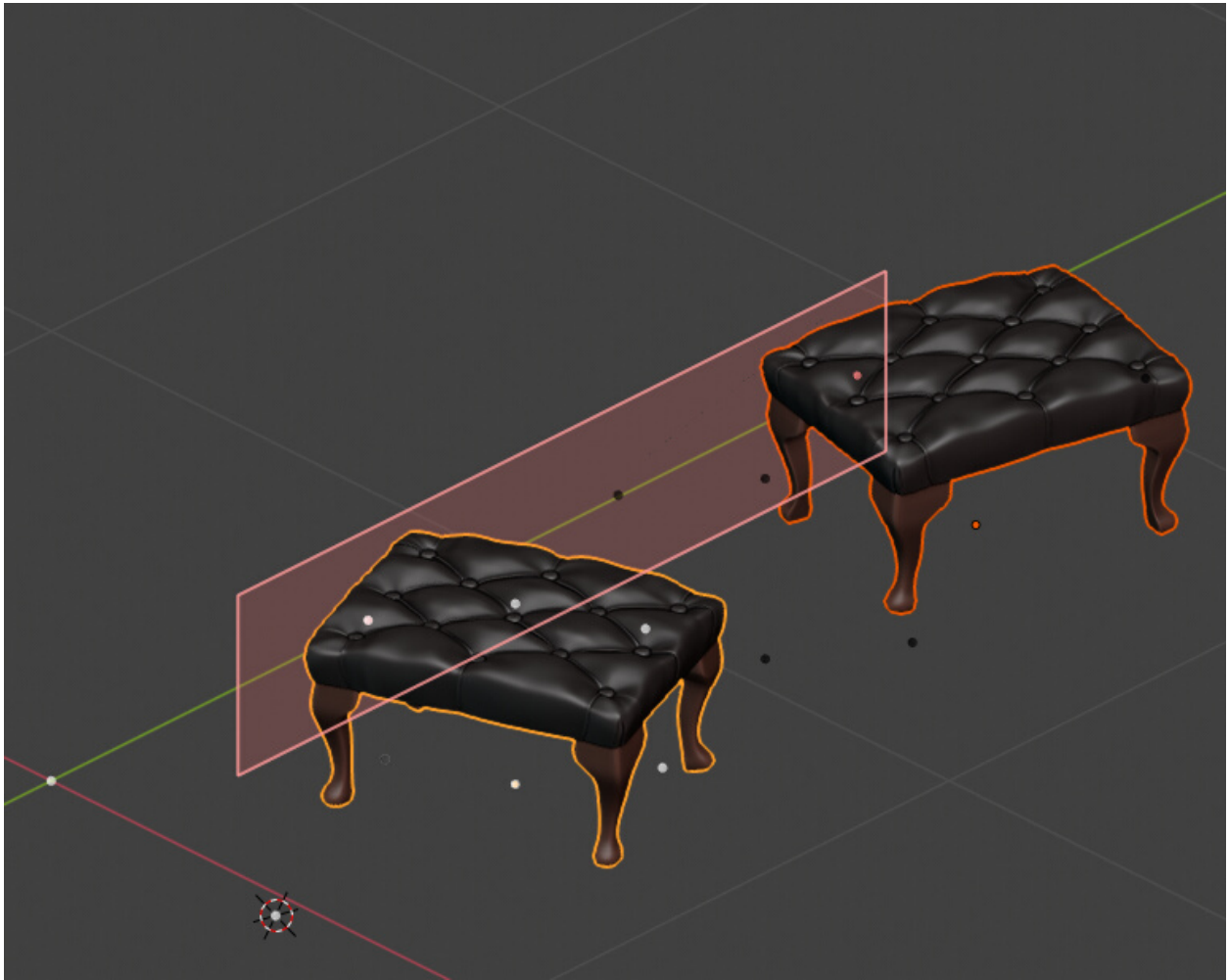
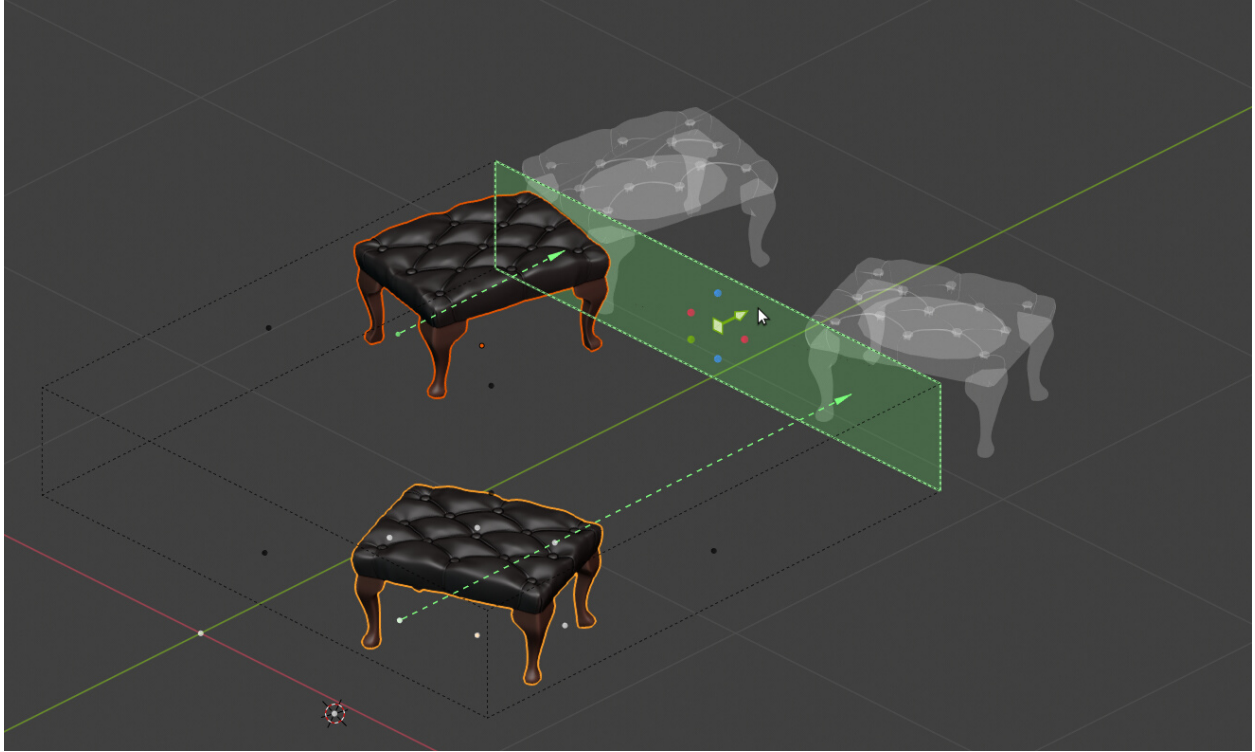Fig. 4: Pressing Enter/Return aligns the objects according to the Active object.

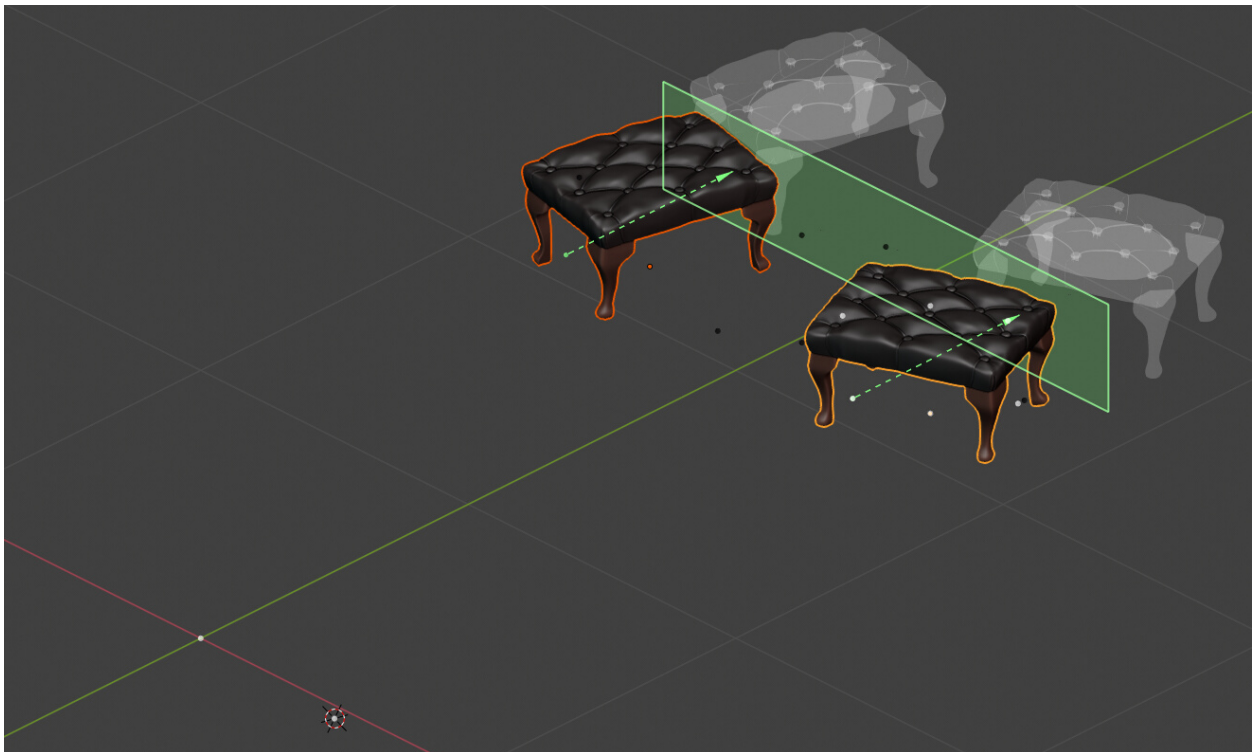Fig. 5: Clicking over one of the black dot gizmos. Hovering the cursor shows the associated bound box.
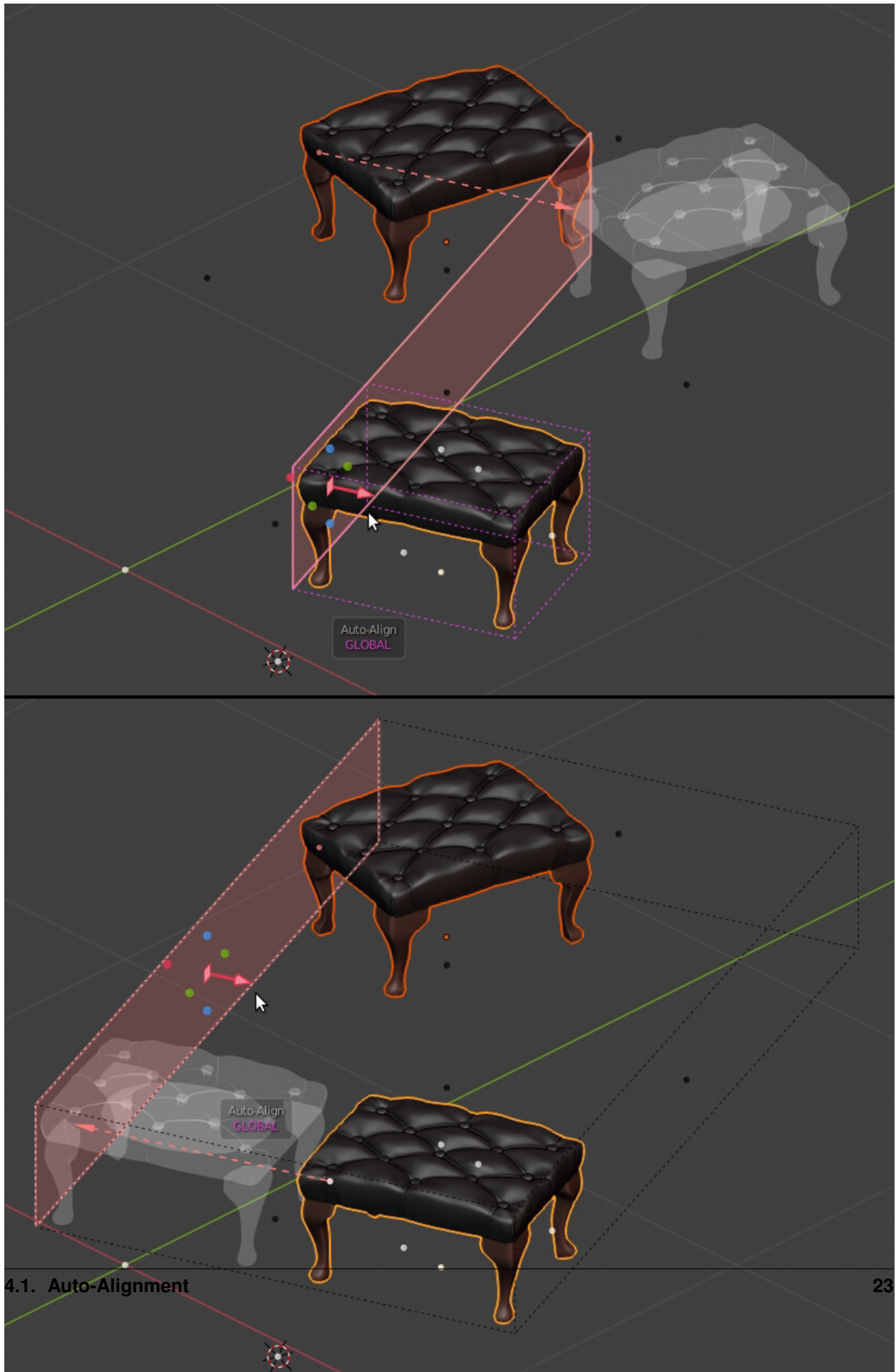

Fig. 6: Pressing Enter/Return aligns the objects according to the Selected objects.

Auto-Align
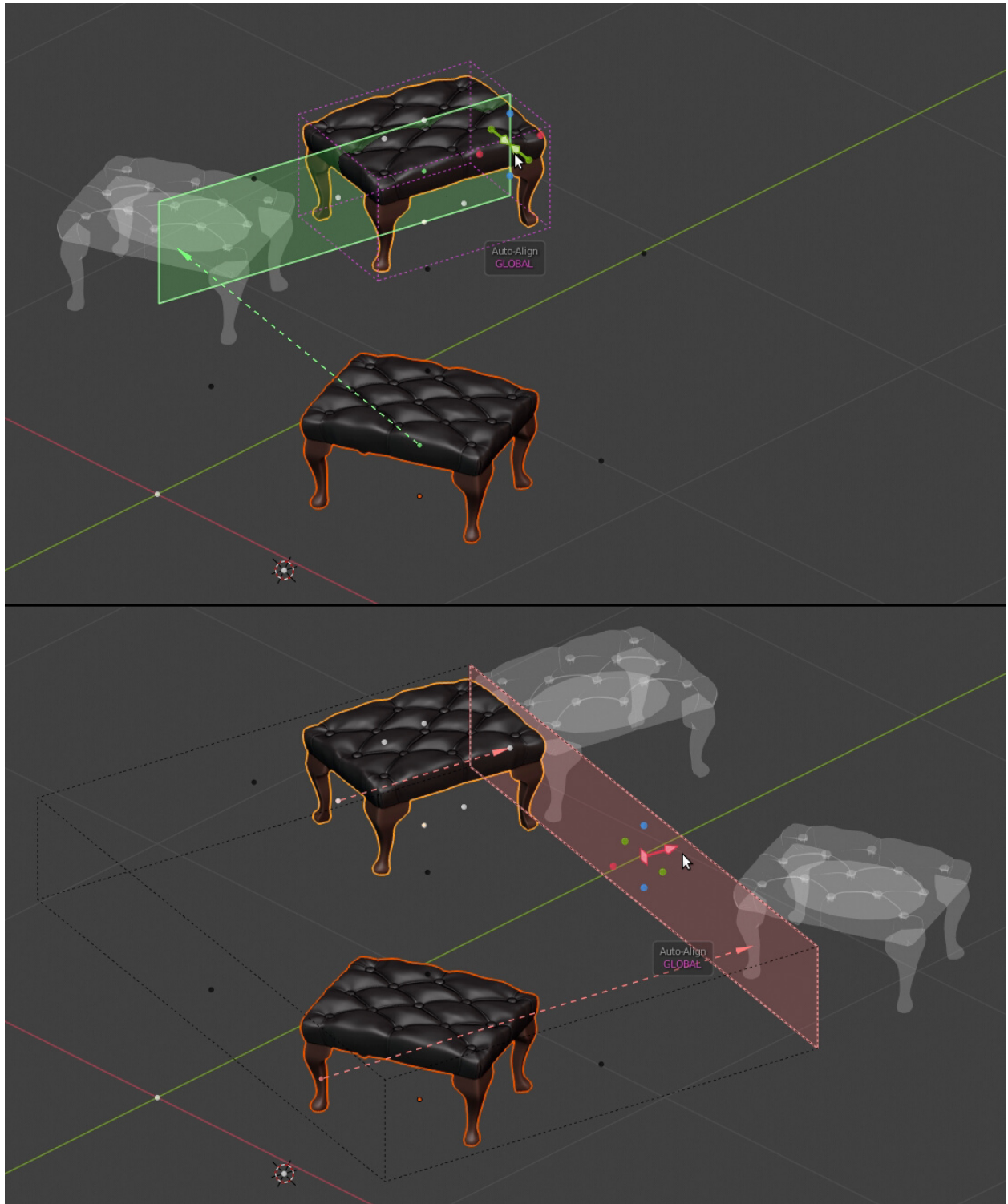**GLOBAL**

Auto-Align
GLOBAL

Fig. 8: Selecting the local bound box from the active object at the top, and from the selected objects at the bottom. Notice how the bound box of selected objects is different than previous image. Your current active object determines the orientation of that box.

4.1.4 Current Orientation

When you hold the **Alt** key, a legend appears with the text 'Auto-Align'. Below, the current **plane orientation** appears, colored in **pink/magenta**, which you can change by **scrolling** your mouse **wheel up/down** when holding **Alt**.
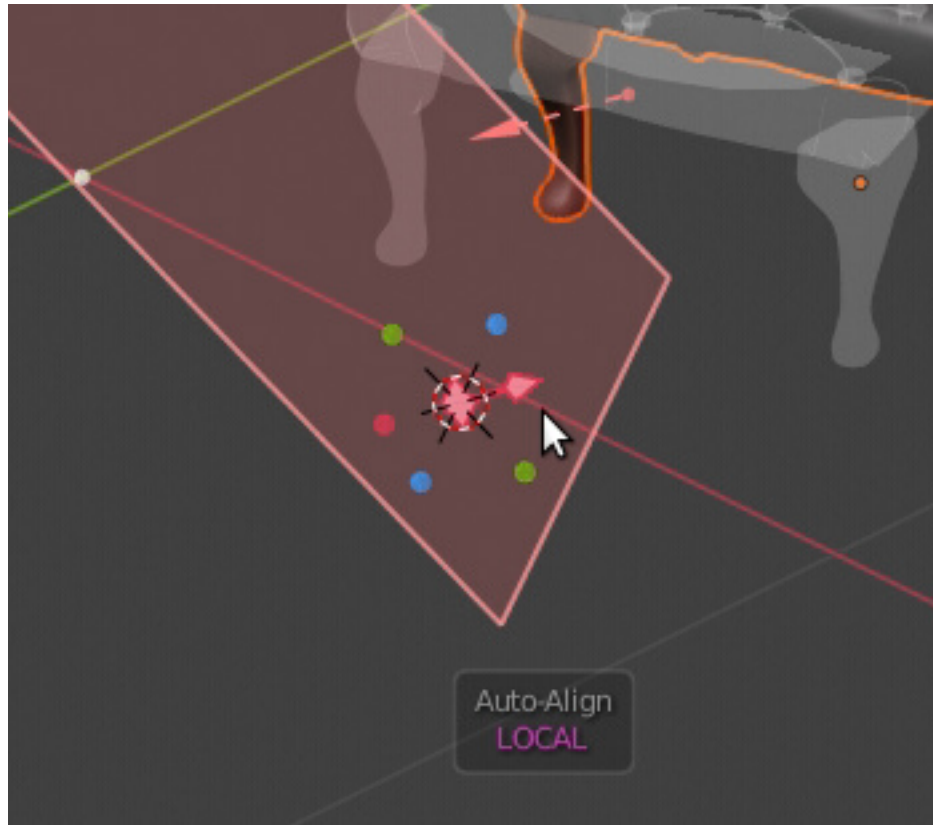

Fig. 9: Use the cursor rotation by selecting the LOCAL orientation.

The **plane orientations** for Auto-Align only apply to the origin of the **world** and **cursor** points, as objects on the other hand, can only use the global and local **bounding boxes**.

4.2 Dragging an axis from a gizmo

You can easily drag an axis from a gizmo by **double clicking** on it, which enters a magnetic state that follows your mouse cursor until you **click again**. You can also drag by **holding** the **left mouse button**, moving the mouse and then **releasing**.

When dragging you can directly enter a value to offset the plane or just type **=** to do so. The units used are those specified in your scene settings. You can type and mix any units supported by Blender and write calculations. Those will be automatically calculated and produce a result value.

Once you have dragged an axis to the offset you want, you can still change the side of alignment, making **left click** over the appropriate arrows of the axis gizmo. You can also do this from the Sidebar (**N**), using the **Alignment depth** buttons.
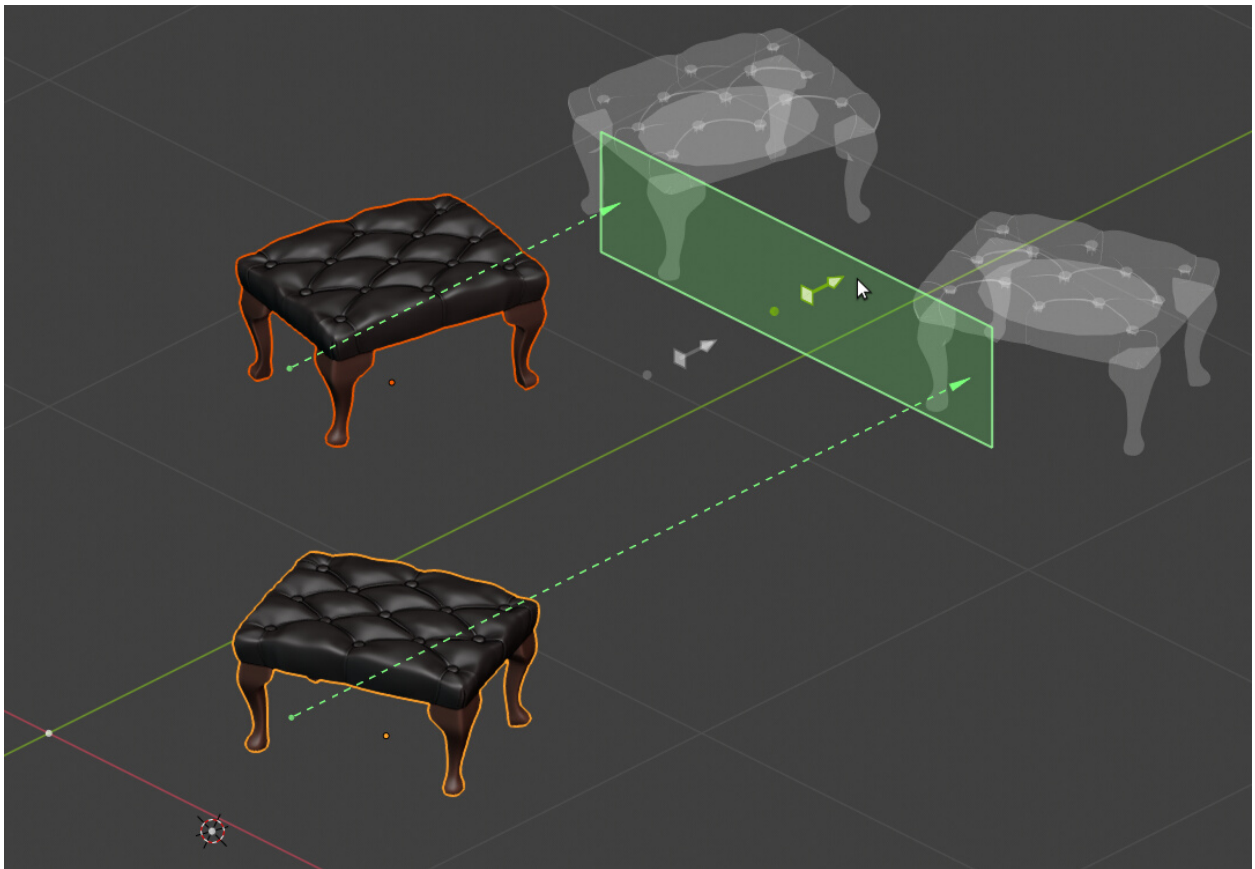
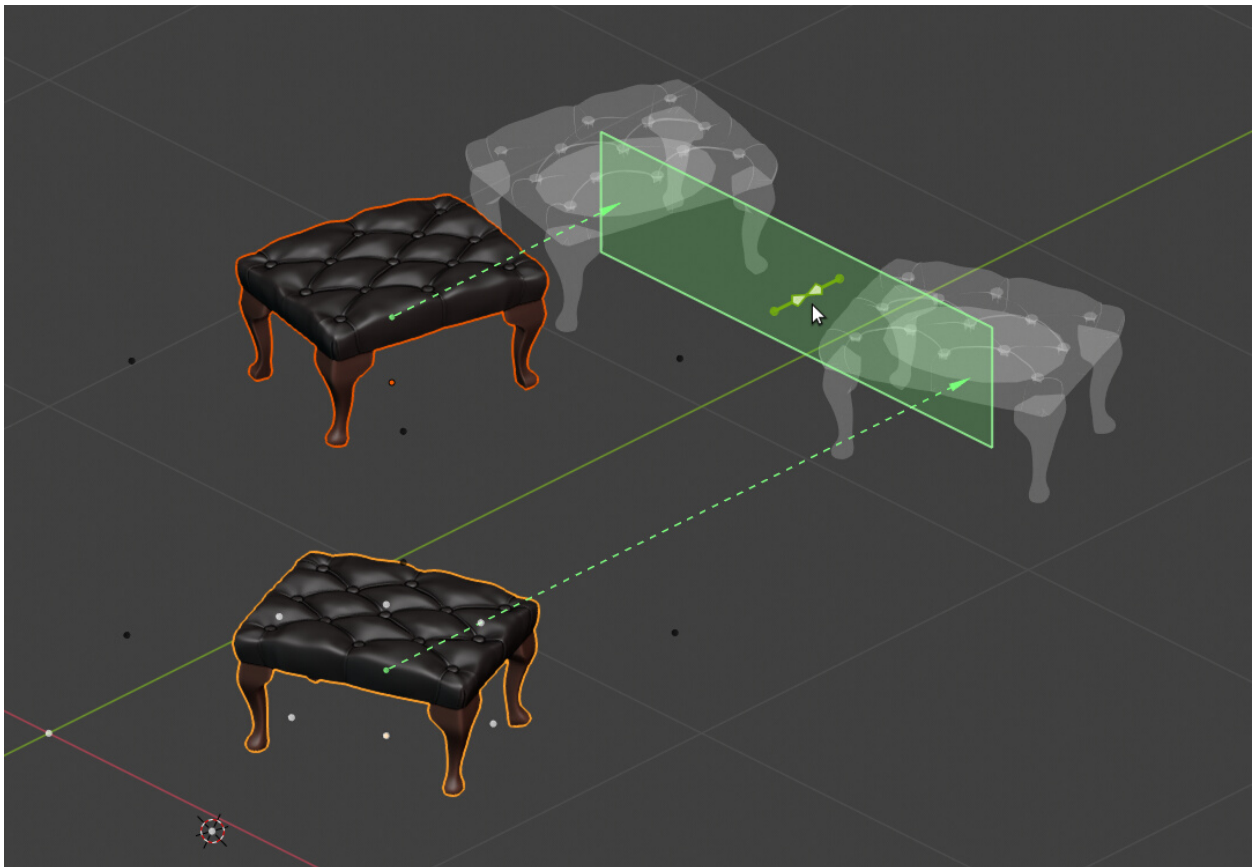Fig. 10: Dragging an axis. You can see the location where the displacement has started with the grey arrow.

Fig. 11: Changing to a centered alignment while the plane is displaced.

4.3 Picking a custom plane

You can pick any mesh surface for alignment in your scene, which creates a draggable plane oriented to the mesh face normal. This is very useful to set a fast plane from Object Mode and to align in realtime, with the advantage of using up to 3 depths in relation to the plane; also with the option of applying an offset to it at any time.

To pick a **custom plane**, select the **Align** Tool and press **Shift + P** with the cursor in the 3D View. An eyedropper with a small text legend appears.

If you point to an object and a mesh face is detected, the legend reports the **object's name** colored in **green** and the **face index** of the mesh face that will be used. If the eyedropper is not pointing to any object, the legend reports the next action colored in **red**: **Clear**.

If you do **left click** with a valid mesh face, a **custom plane** is created, with an axis gizmo oriented to the face normal, showing two blue dots at both sides of the plane. The axis of the plane is blue, indicating that the normal is actually the Z axis of the mesh's face.

When passing with the mouse over the dots, an arrow appears, allowing you to select one of the three depths of alignment. You can also change the depth from the Sidebar (**N**), using the **Alignment depth** buttons.

Drag the **custom plane** at any time as explained above in **Dragging an axis from a gizmo**.

On the other hand, if no mesh face is detected (including non mesh objects like metaballs, curves, etc.), the **Clear** action clears any **custom plane** that you may be using at the time.

When a custom plane is defined, the **Plane** subpanel in the Sidebar (**N**) updates to reflect this change. The **Plane target** appears deselected, and below, the text 'Custom Plane' followed by an **X** button appears, replacing all other options in that section.

If you click the **X** button, the custom plane is **cleared**. You can select any other **Plane target** that you may want from this panel, recovering the settings and ignoring the custom plane.

4.4 Plane selection mode

4.4.1 Global Space

When holding the **Shift** key pressed in the 3D View, you access the **Plane selection mode**. This mode allows you to select a plane from common places like the **bounding boxes** of objects, the **location** of objects, the origin of the **world**, the **cursor** or any **other object** that you may have defined as **Plane target**.

To select the plane interactively, hold the **Shift** key while you move the mouse cursor. Below it, a small rounded box with a legend appears, to let you know what selection mode you are in. In this case, it shows the word 'Plane'.

There are three different key points that you may select in this mode:

- **White** rounded points in the corners of the active object will set a plane that follows the **Active** object's bound box.

- **Black** rounded points in the corners of all selected objects will set a plane that follows the bound box of your current **Selection** of objects.

- **Red**, **green** and **blue** colored points belong to a key point such as the **location** of the Active object (its origin pivot point), the origin of the **world** or the **cursor**. The three colored points form a triad of crossed axes that relate to the same location.

When you pass close to a selectable point, it highlights in **yellow**, indicating that you can select it. Along with the point, a **colored line** will be drawn, this is the **normal** of the Plane, indicating the axis that will be taken.
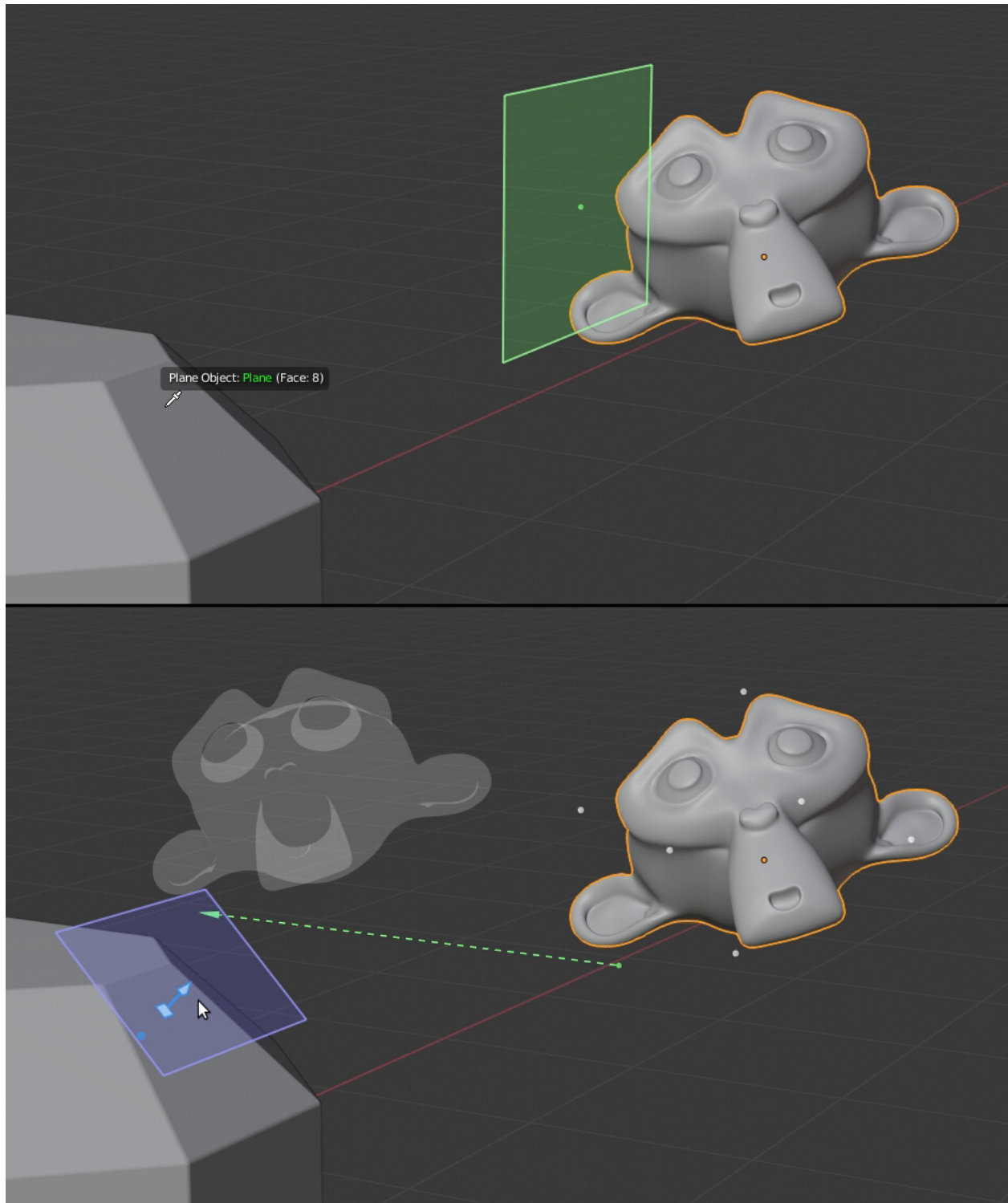
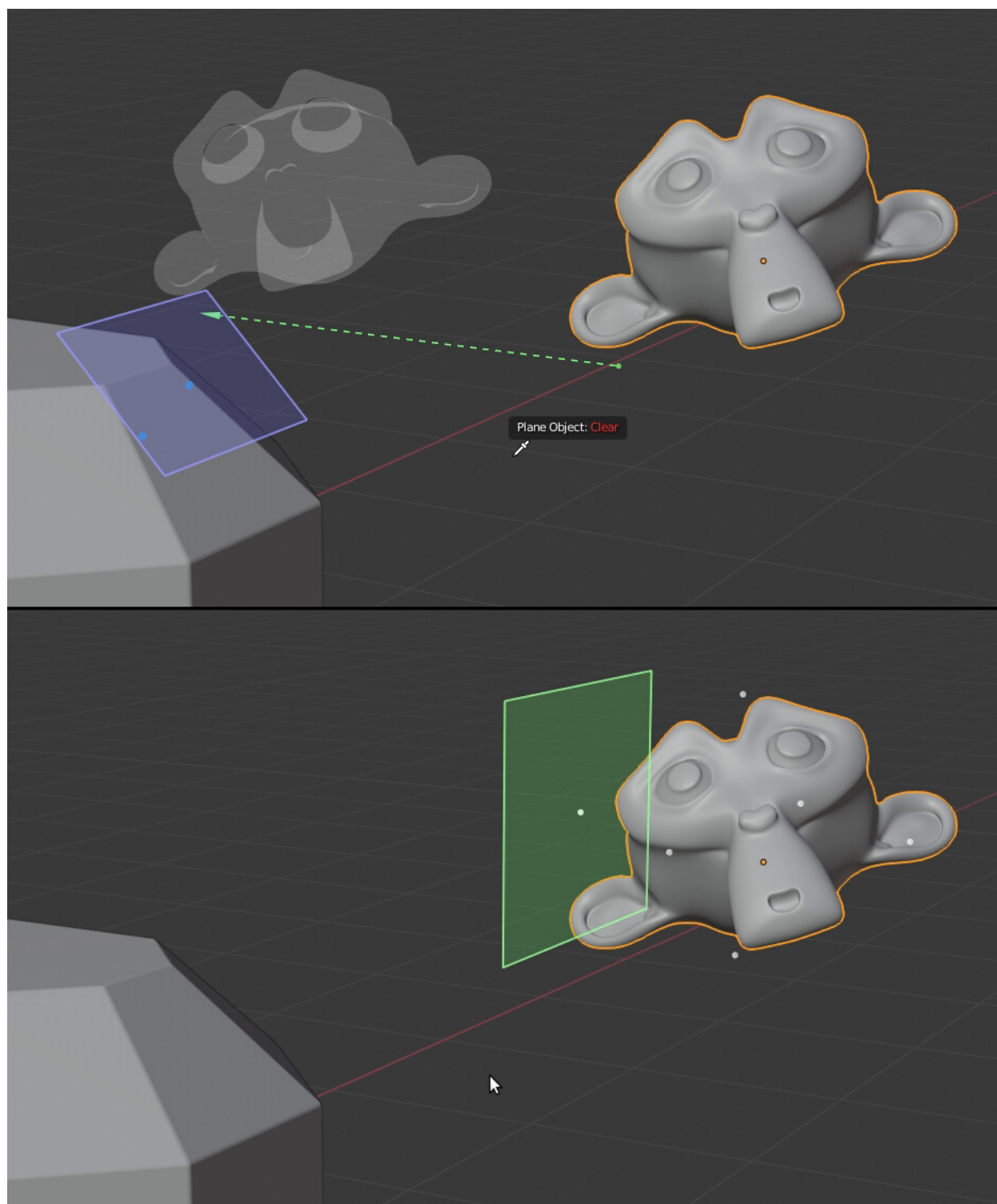Fig. 12: The custom plane can be picked from an arbitrary mesh face.

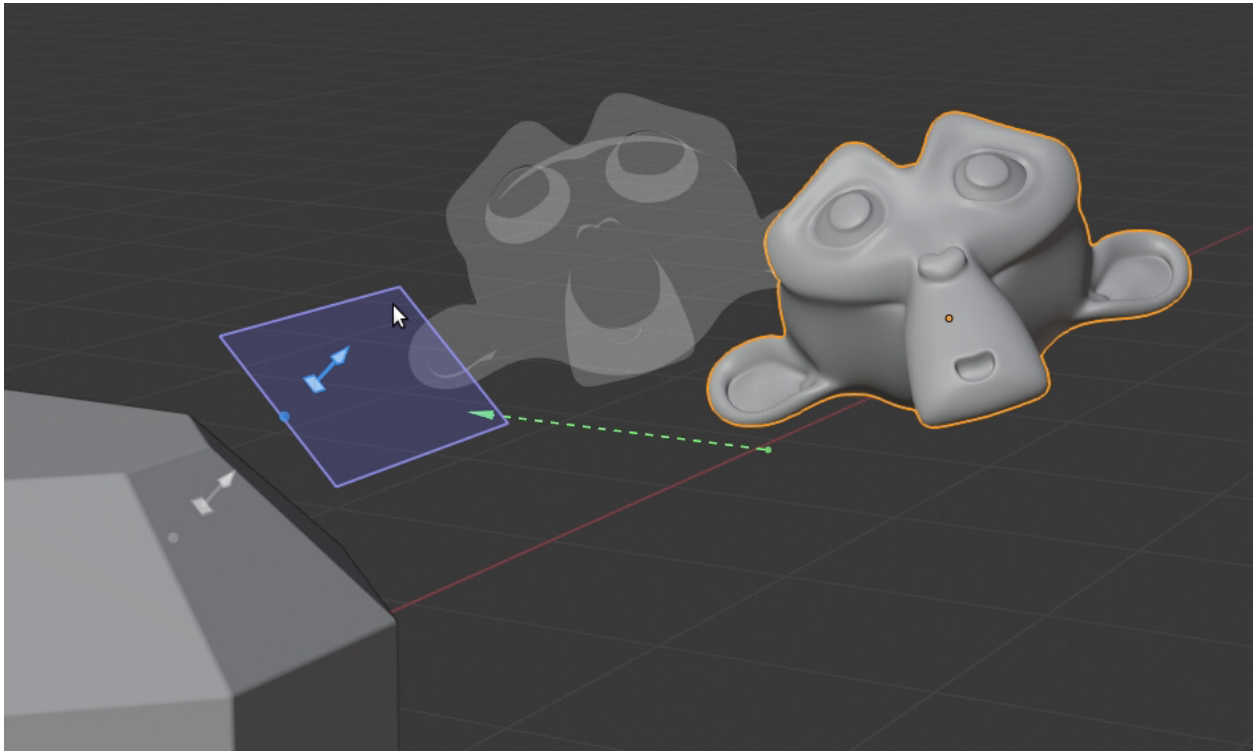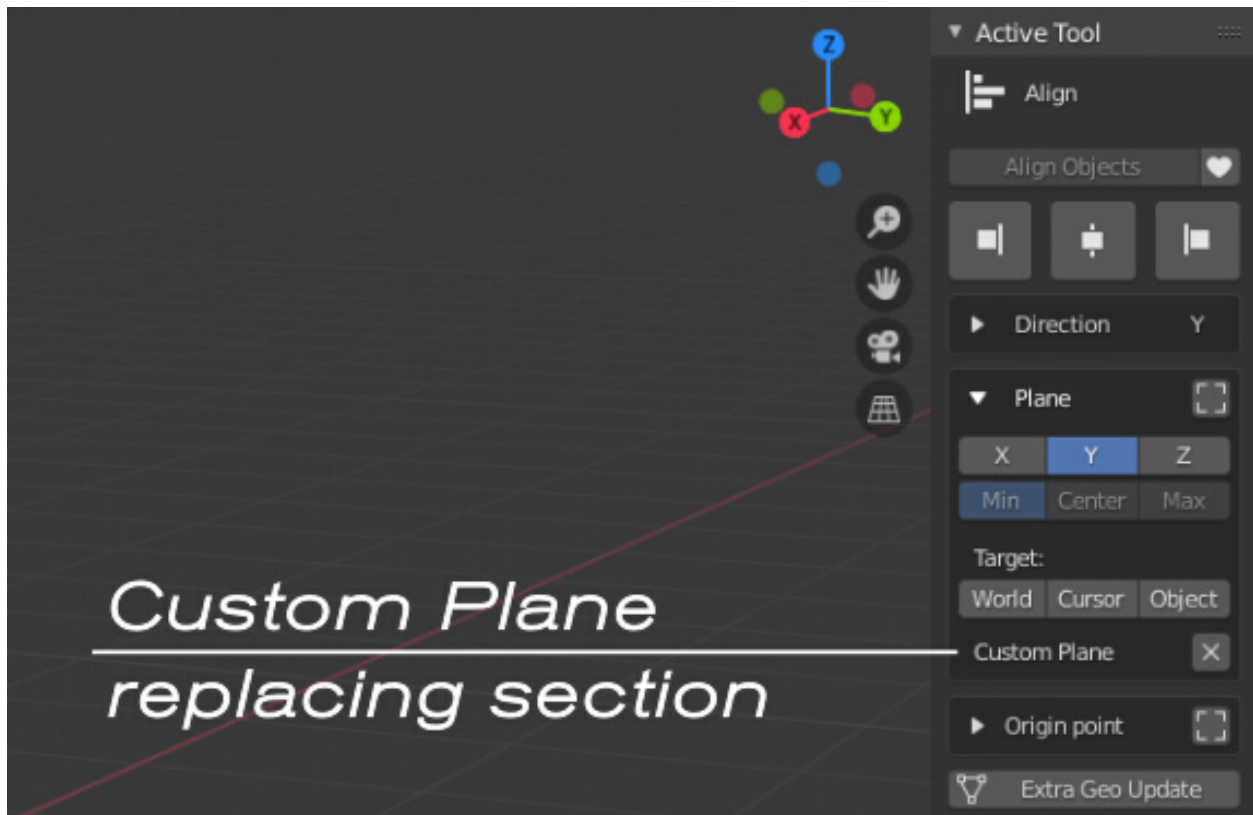Fig. 13: The custom plane being cleared.
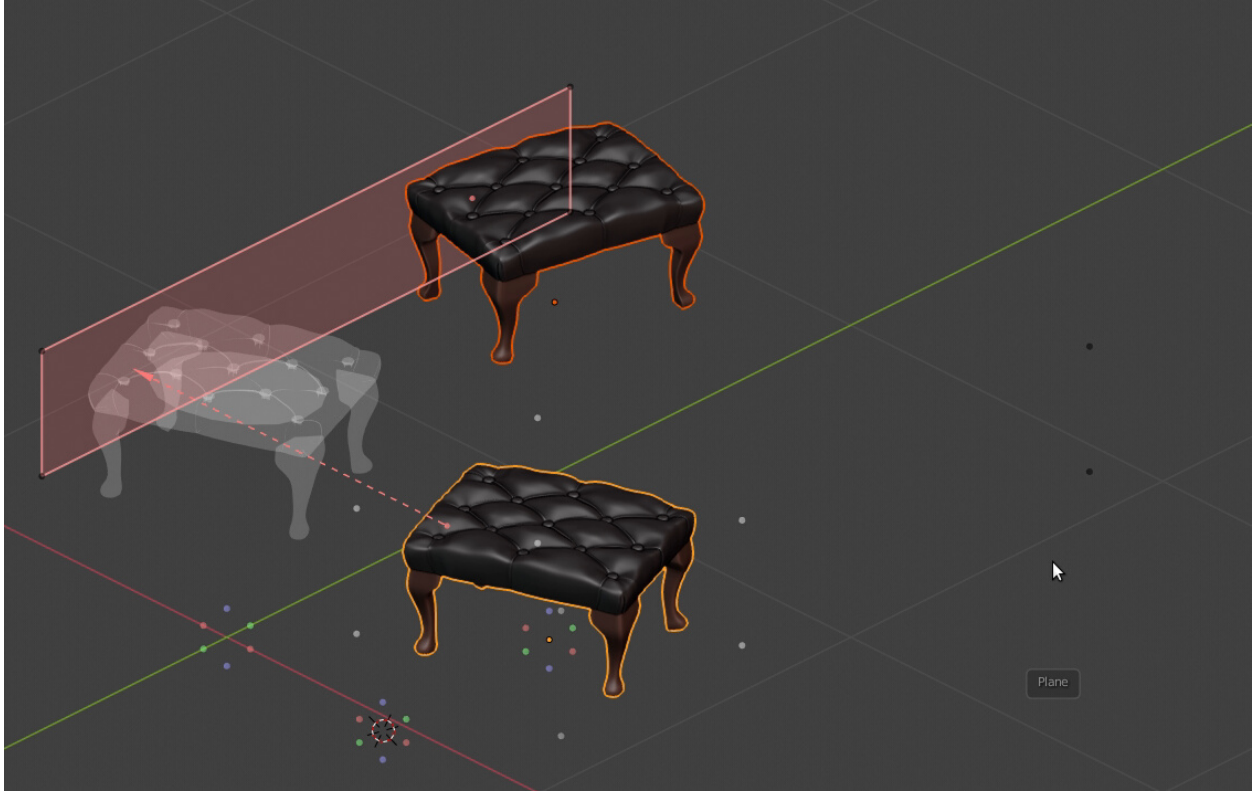
Fig. 14: Dragging the custom plane

Fig. 15: While you hold the key, you can see all the available rounded points from where you can select *the Plane*.

The bound box also highlights when you are close to one of its points, to help you understand what kind of plane are you selecting. The bound box is drawn **white** when referring to the **Active** object, and **black** when referring to your current **Selection** of objects.

The colors of the normal lines are codified, meaning, **light red** as the X axis Plane, **light green** as the Y axis Plane, and **light blue** as the Z axis Plane.

If you are over a clickable point and do **left click** while you still hold the **Shift** key, the Plane is selected. If you check the **Plane** subpanel in the Sidebar (**N**), you can see that your actions get reflected there, from where you can change the settings at any time and select another **Plane**, **Axis** and **Depth**.

To show the bound box used to obtain the Plane, enable the little **bounding box button** next to the **Plane** panel.

The Plane's bound box gets drawn only when referred to the box of the **Active** object or the current **Selection** of objects. When you use the origin of the world, the cursor or the location of an object, there is no bound box to draw. The Plane's bound box is colored with the current axis Plane in use.

4.4.2 Local Space

To select the Plane in local space, hold both the **Shift** and **Alt** keys simultaneously.

If you have objects selected, you can see the rounded points in the corners of the local bounding boxes. They are colored in **pink/magenta** when referring to the **Active** object and **black** when referring to your current **Selection** of
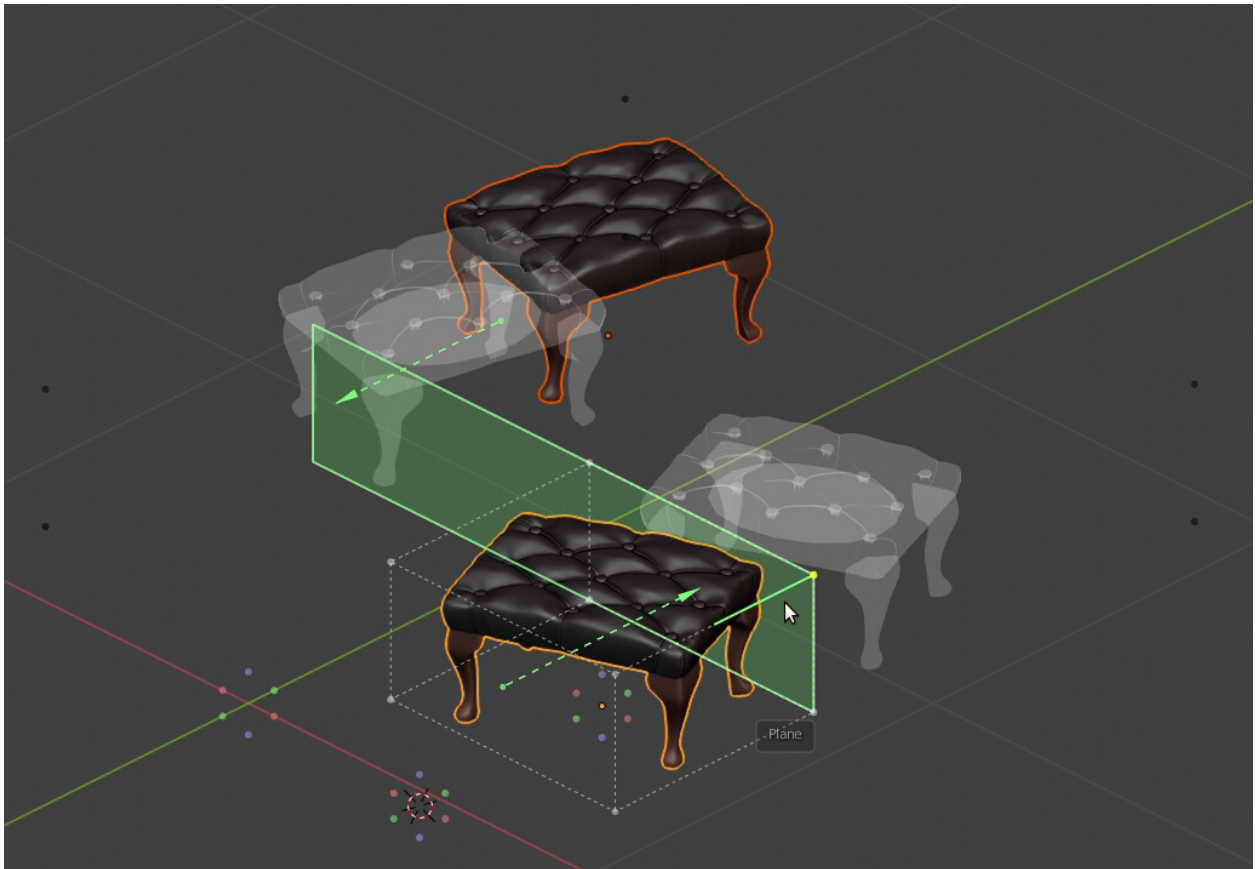
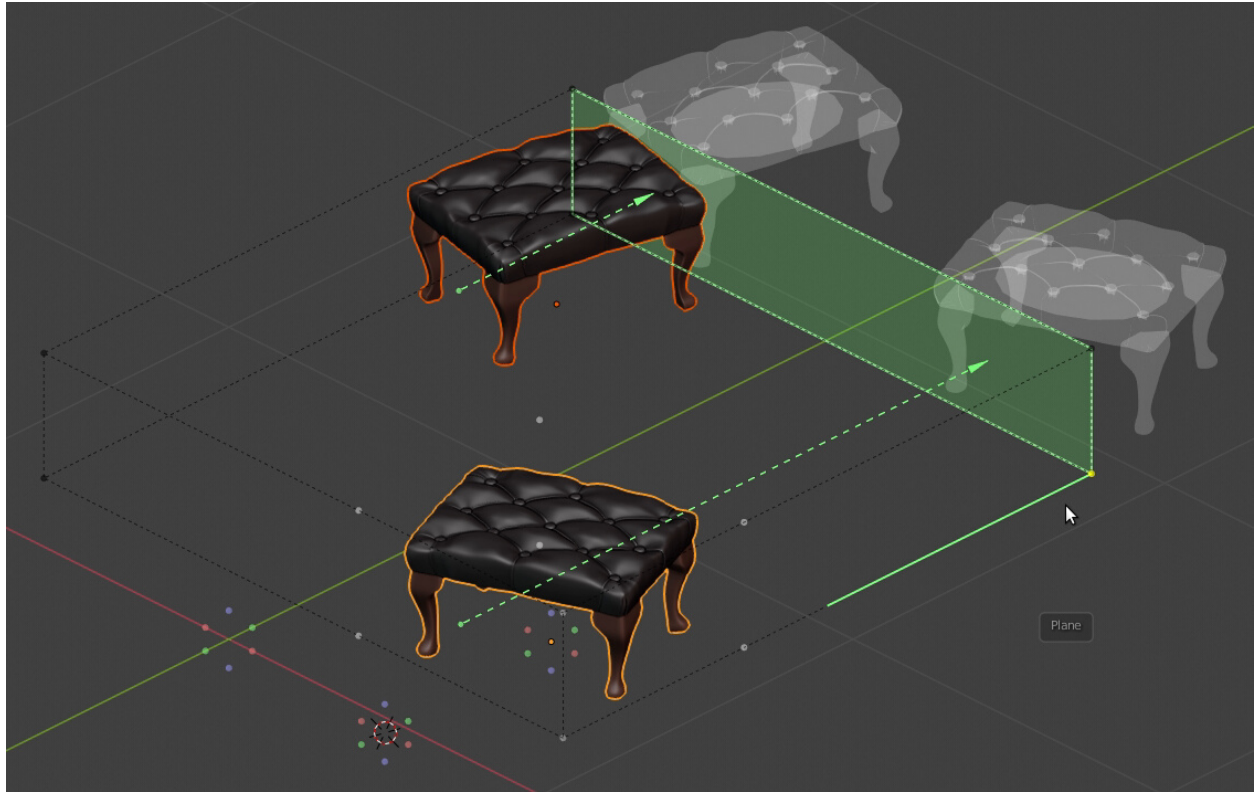Fig. 16: Selecting the global Y axis Plane from the Active object.

Fig. 17: Selecting the global Y axis Plane from the current Selection of objects.

objects.

The bound box surrounding your Selection of objects is generated according to the local space of your Active object. If you select another object as Active you get a different bound box surrounding all objects.

You can select any of the axes in the bound box with **left click** while in this mode.

This action will also enable the use of the **Local bounds** button in the Sidebar (**N**), from where you can also switch between global/local space.

If the bound box is being drawn in the 3D view, it is shown colored with the current axis Plane in use.

4.4.3 Scrolling the current orientation in Plane selection mode

When you are in Plane selection mode, holding the **Shift** and **Alt** keys, you can also see the legend with the word 'Plane', and below, the current **plane orientation** in use, colored in **pink/magenta**, which you can change by **scrolling** your mouse **wheel up/down**. The plane orientation can also be set from the **Plane** panel in the Sidebar (**N**), below the Plane **Target**.

The **plane orientations** are only used for some key points such as the origin of the **world**, the **cursor** and the **location** of the Active object.

You may use any of the predetermined orientations such as: **Global**, **Local** and **View**. Select the **Custom** orientation option to use your own orientations.
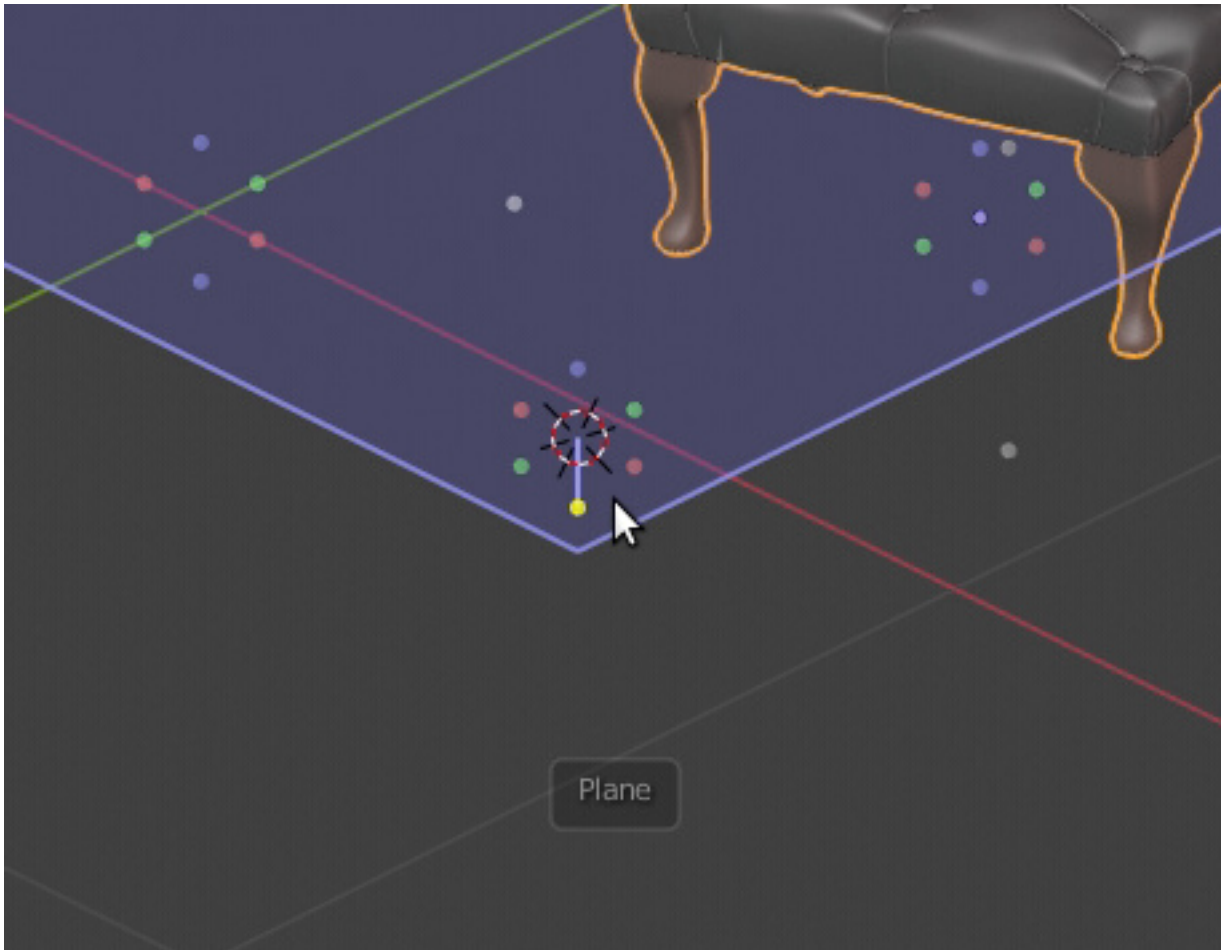
Fig. 18: Selecting the global Z axis Plane from the cursor location. You can see the other key points that can be selected: the origin of the world at the left and the location of the Active object at the right.

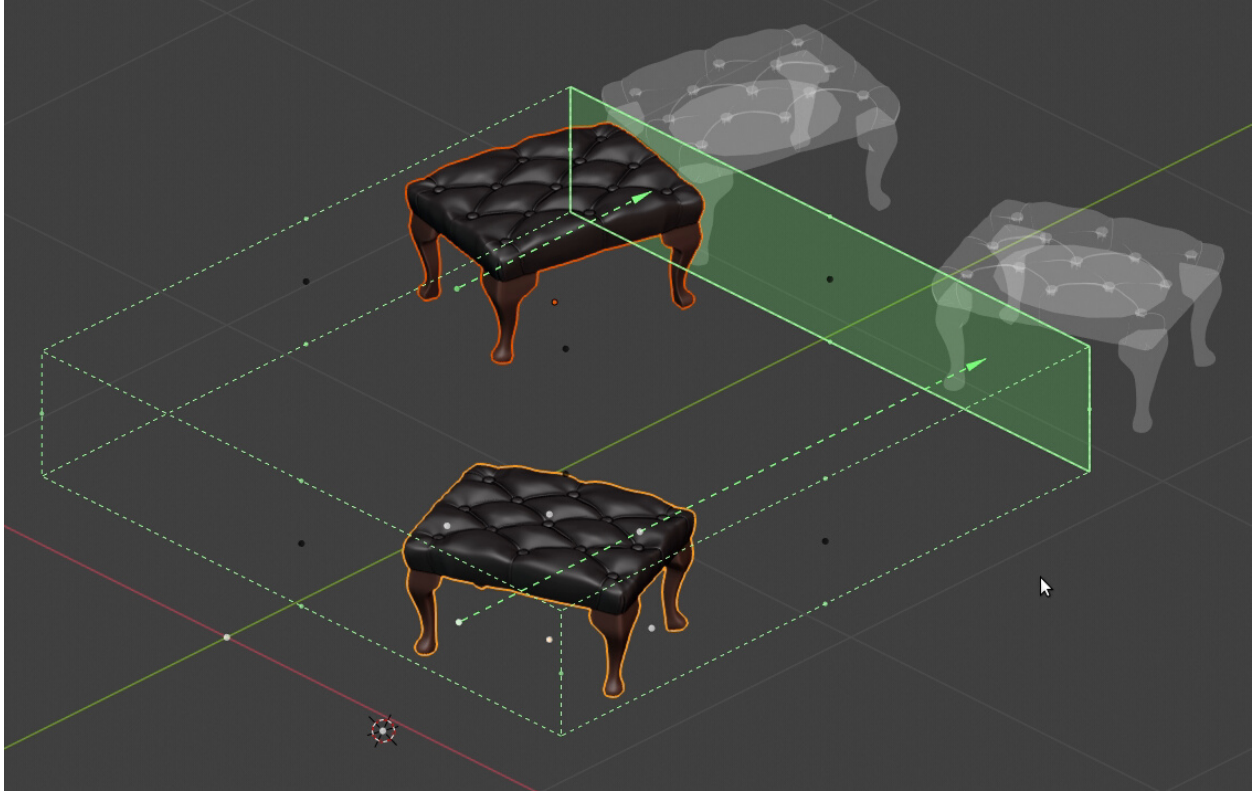Fig. 19: The bounding box button enabled.

Fig. 20: The Plane bound box being drawn.

4.4.4 Selecting a Plane from the basic bound box

You can use a more basic approximation to the object's geometry by using a **global** bound box that surrounds the **local** bounds of the object. This bound box ignores the object's geometry, which usually means that the projection Plane will not always exactly touch the object's surface.

To use this bound box, use the shortcut **Shift + G** or by disabling the **Use geometry** button in the **Plane** panel from the Sidebar (**N**), when the plane **Target** is set to use the **Object Bounds**.

Both **global** and **local** bound boxes are drawn simultaneously in this mode.

4.4.5 Selecting a Plane from an object outside of selection

If you need to select a Plane from an object outside your current selection, you can do this by selecting it in the **Plane Object** dropdown list of the **Plane** panel or by using the eyedropper in the name field to select the object directly from the 3D View.

To clear the selected Plane Object, just click the **X** button next to the Object name.

Setting the Plane Object allows you to use its **location** and **bound box** as **Plane targets**, so when you are in Plane selection mode pressing **Shift** and/or **Alt**, their elements are drawn and you can set an alignment Plane from them.

This way you have freedom to manipulate your selected objects while the Plane Object remains untouched.
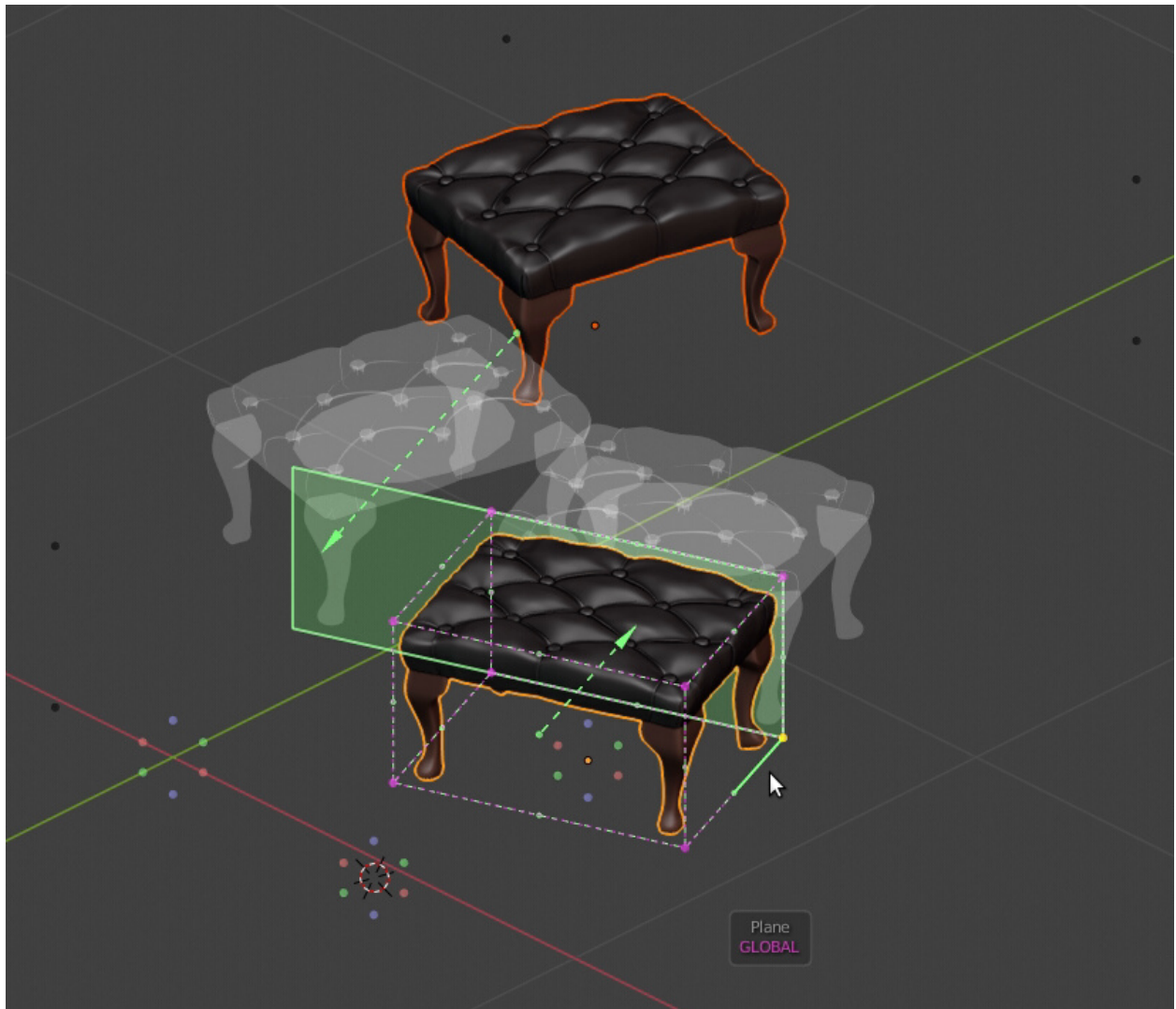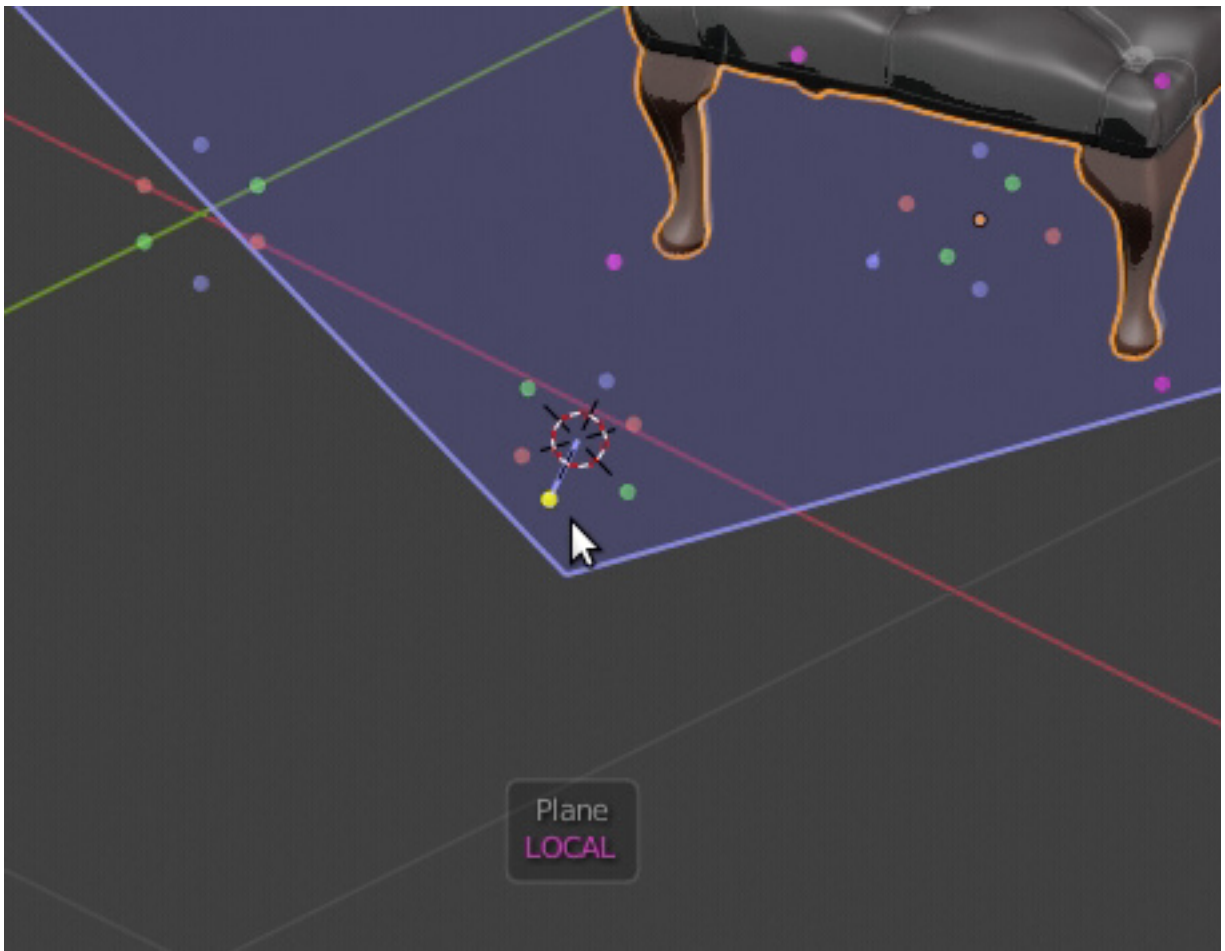
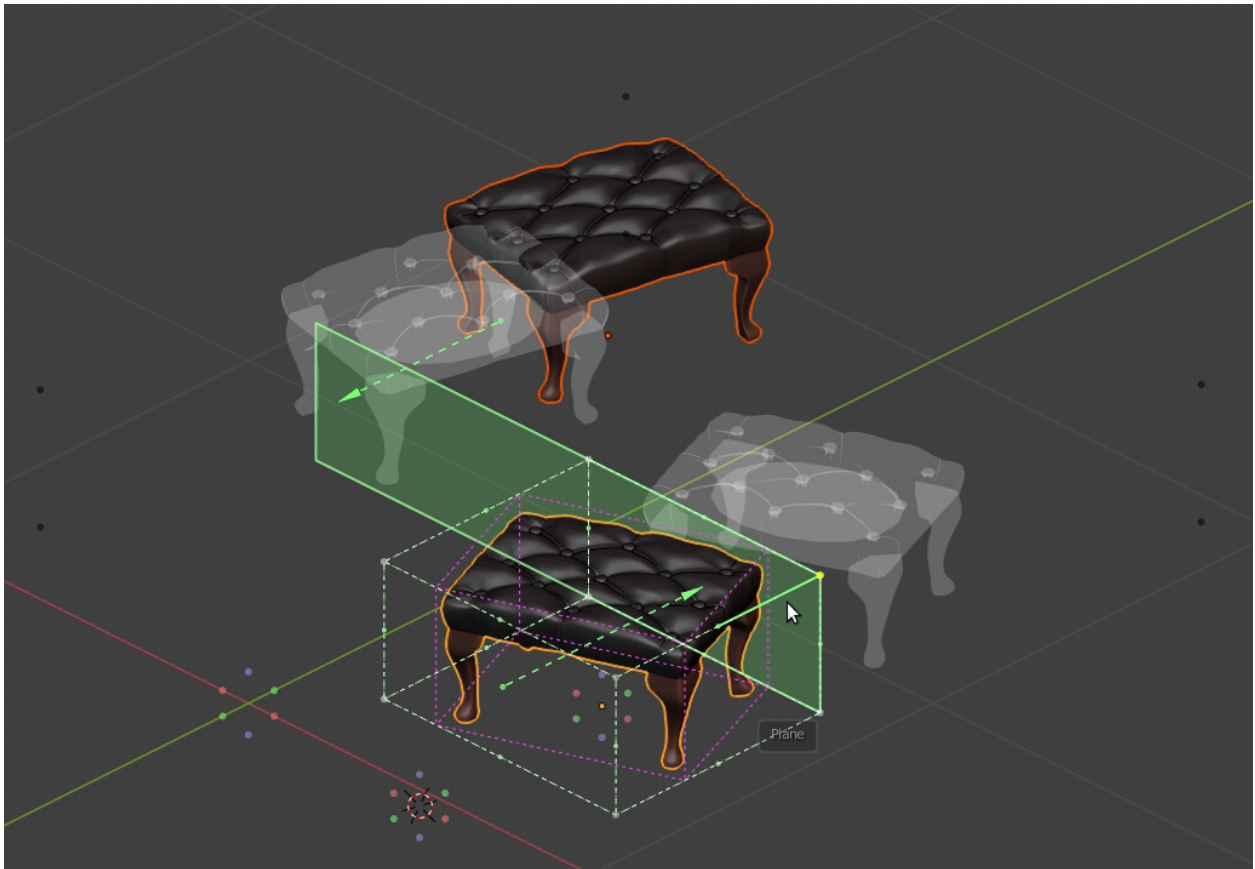Fig. 21: Selecting a Plane from local bounds.

Fig. 22: Selecting a Plane from the global bound box, while local bounds are also drawn.
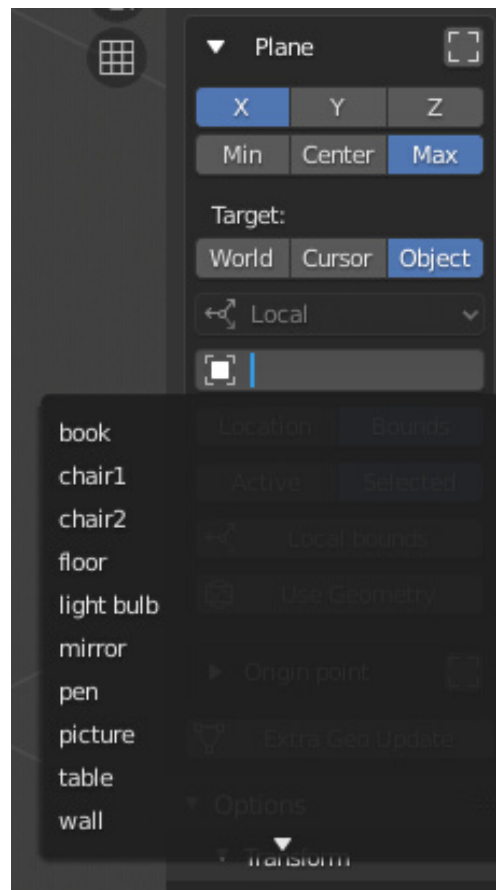
Fig. 23: Selecting a target object from the dropdown list.

4.4.6 Selecting a Custom Plane from Edit mode

If you have a mesh object and enter **Edit mode**, selecting the Align tool from the Toolbar, displays different options in the Sidebar (**N**). From here you can **Set** and **Remove** a **custom plane**.

Fig. 24: The Set Custom Plane button shown in Edit mode.

Setting this is the equivalent to the custom plane that you can pick from the 3D view when pressing **Shift + P**, except that this way you use the mesh elements instead, which may use the **vertices**, **edges** or **faces** that you select. Any selection of elements is allowed.

After selecting your elements, pressing the button **Set Custom Plane**, creates a draggable custom plane that is drawn in the 3D view colored with the Z axis Plane. Once you have set the custom plane, the **Remove** button becomes available. Unlike the custom origin, the custom plane is **independent** of any object, and therefore you can drag it at any time, select and move all the objects you want, while the custom plane keeps the same position and orientation.

If you can't see the custom plane in Edit mode when you have already **set** it, it may be that you need to enable the **Show Gizmo** button in the 3D view. You can easily toggle that option with the shortcut **D**.
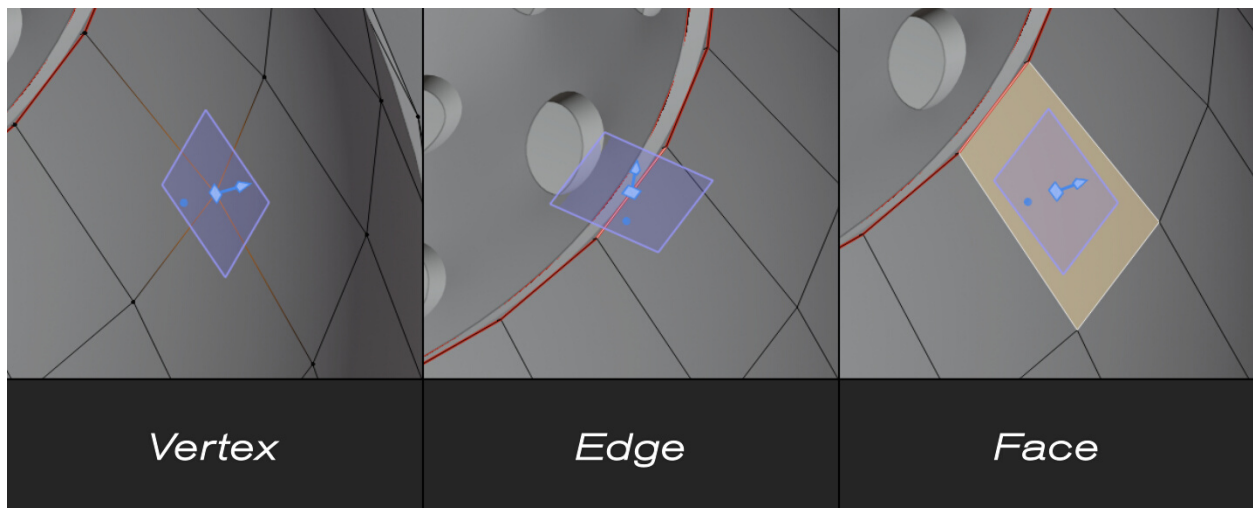

Fig. 25: A custom plane set in Edit mode.

To make use of the custom plane just go back to Object mode.

When you have set the custom plane, you can find a new text line 'Custom Plane' in the **Plane** panel found in the Sidebar (**N**), replacing the plane target options. From here you can also **remove** the custom plane at any time by pressing the little **X** button.

The custom plane is also lost when you get out of the Align tool both in **Object** and **Edit** modes. This is by design.

4.5 Origin selection mode

4.5.1 Global Space

When holding the **Ctrl** key pressed in the 3D View, you access the **Origin selection mode**. This mode allows you to select an origin point which is used to displace the object during alignment. You can select an origin point from common places like the **bounding boxes** of objects, the **location** of objects, the origin of the **world**, the **cursor** and any individual mesh **vertex** that you may have defined.

To select the origin interactively, hold the **Ctrl** key while you move the mouse cursor. Below it, a small rounded box with a legend appears, to let you know what selection mode you are in. In this case, it shows the word 'Origin'.

While you hold the key, you can see all the available points from where you can select the Origin point. In this selection mode, the points in the **corners** of bounding boxes are **rounded**, while any **midpoint** of the bound box is a **square point**. All other points are also rounded, like the one from the origin of the **world**, the **cursor**, the **location** of objects and **vertex origins**.

There are two kind of points that you may select for bound boxes:

- **White** points appear in the bounds of the **Active** object and are related to the **individual** alignment of objects, projecting all selected objects, one by one against the alignment Plane. The origin point is **unique** for every object. This is the equivalent of having disabled the option **All selected** in the **Origin point** panel from the Sidebar (**N**).

- **Black** points appear in a generated bound box that surrounds your current **Selection** of objects and are related to a **grouped** alignment of objects, projecting all objects against the alignment Plane like if they were just one single object. The origin point is **common** for every object. This is the equivalent of having enabled the option **All selected** in the **Origin point** panel from the Sidebar.
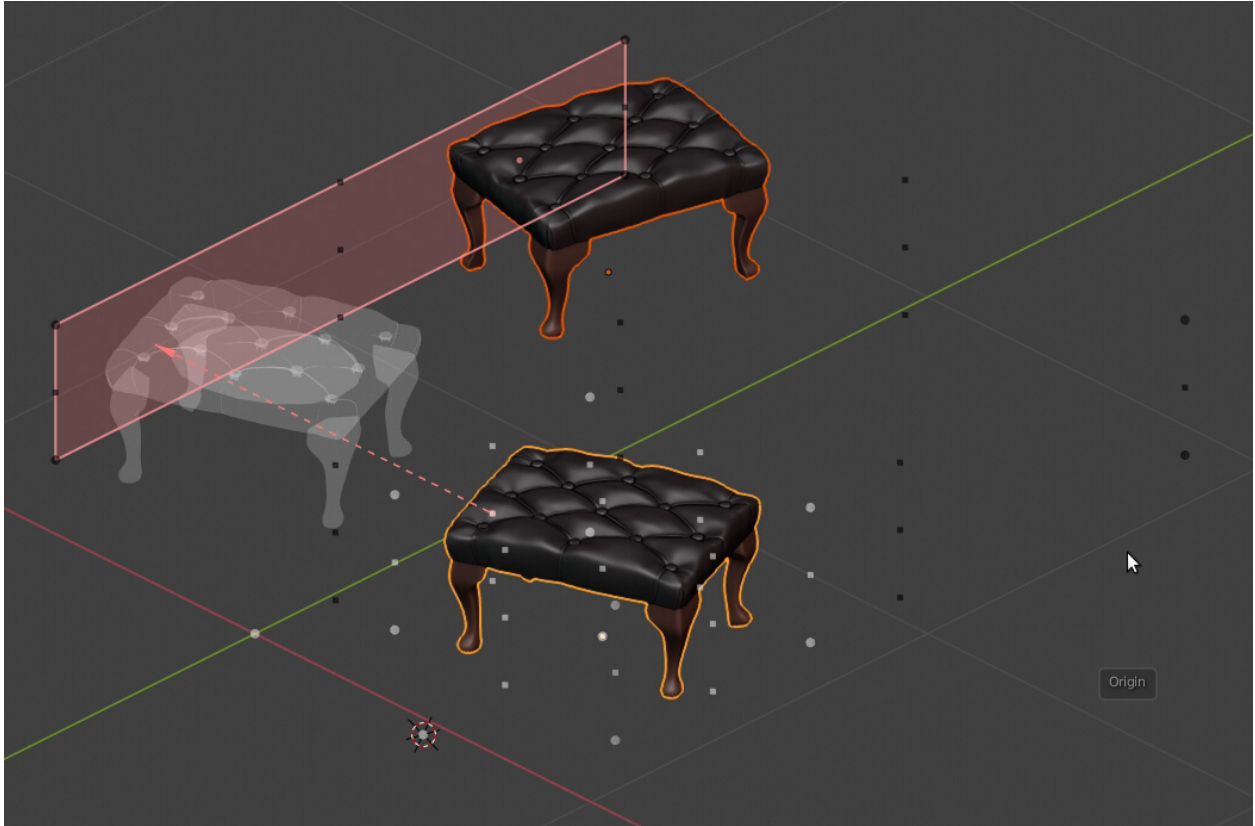
When you pass close to a selectable point, it highlights in **yellow**, indicating that you can select it.

The bound box also highlights when you are close to one of its points, to help you understand what kind of origin point are you selecting. The bound box is drawn **white** when referring to project objects **individually**, and **black** when referring to project them **grouped** as a whole.

If you are over a clickable point and do **left click** while you still hold the **Ctrl** key, the Origin point is selected. If you check the **Origin point** subpanel in the Sidebar (**N**), you can see that your actions get reflected there, from where you can change the settings at any time and select another Origin point.

To show the bound box of all the selected objects and appreciate what Origin point is being used for every one of them, enable the little **bounding box button** next to the **Origin point** panel.

The bounding boxes get drawn only when they are being used to take an Origin point. When you use the origin of the world, the cursor or the location of objects, there is no bound box to draw.

4.5.2 Local Space

To select the Origin point in local space, hold both the **Ctrl** and **Alt** keys simultaneously.

If you have objects selected, you can see the rounded points in the corners of the Active object's local bound box, and also the square ones in the midpoints of the box. They are colored in **pink/magenta**.

You can select any of the points in the bound box with **left click** while in this mode.

This action will also enable the use of the **Local bounds** button in the Sidebar (**N**), from where you can also switch between global/local space.
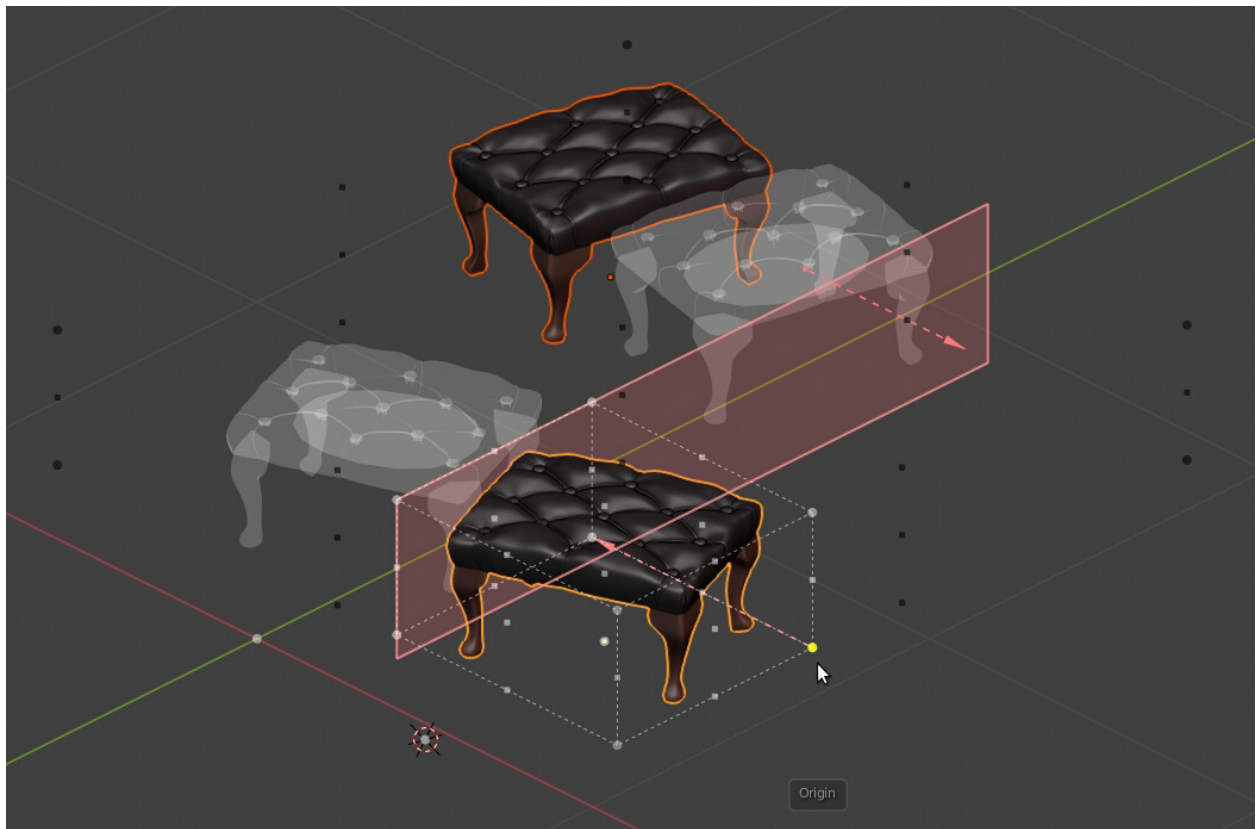
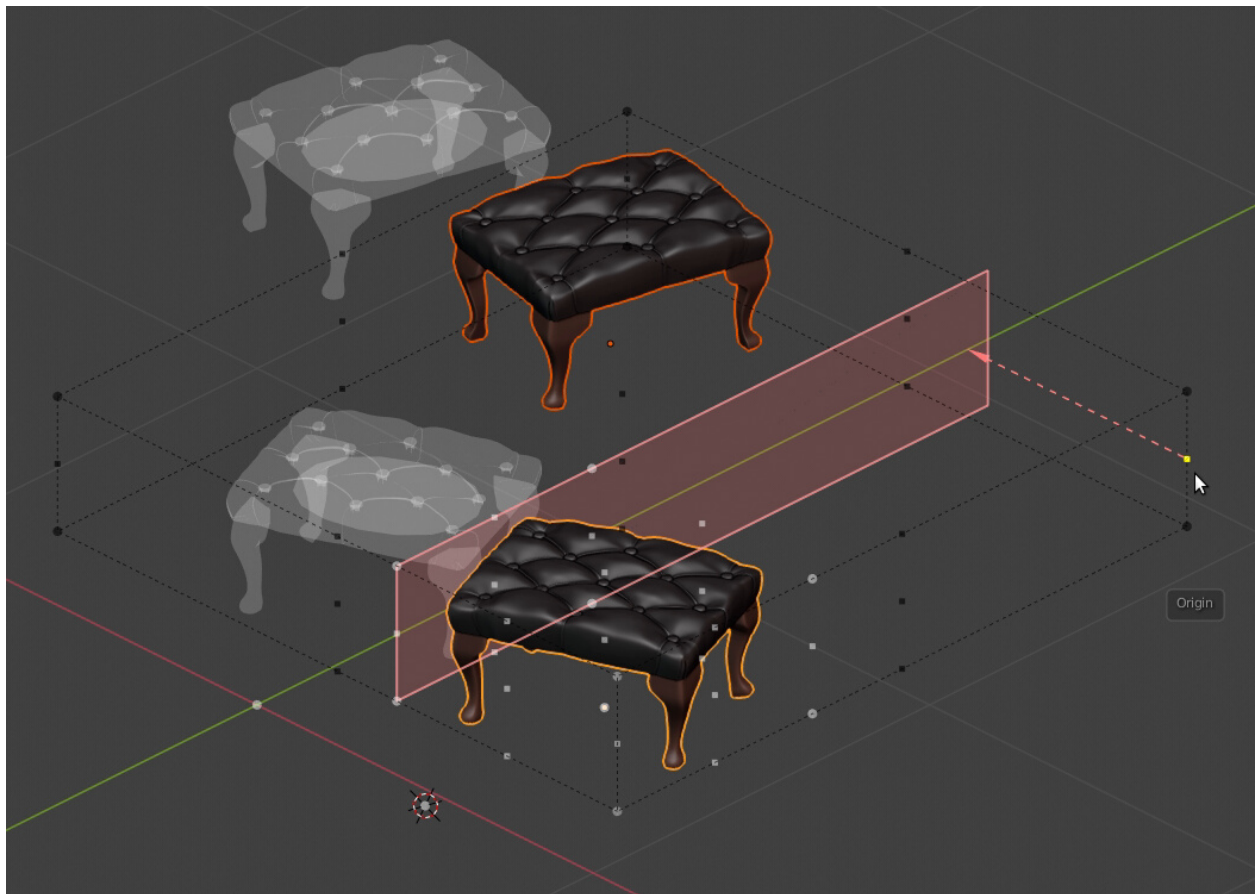Fig. 26: Selecting the Origin point from the Active object.

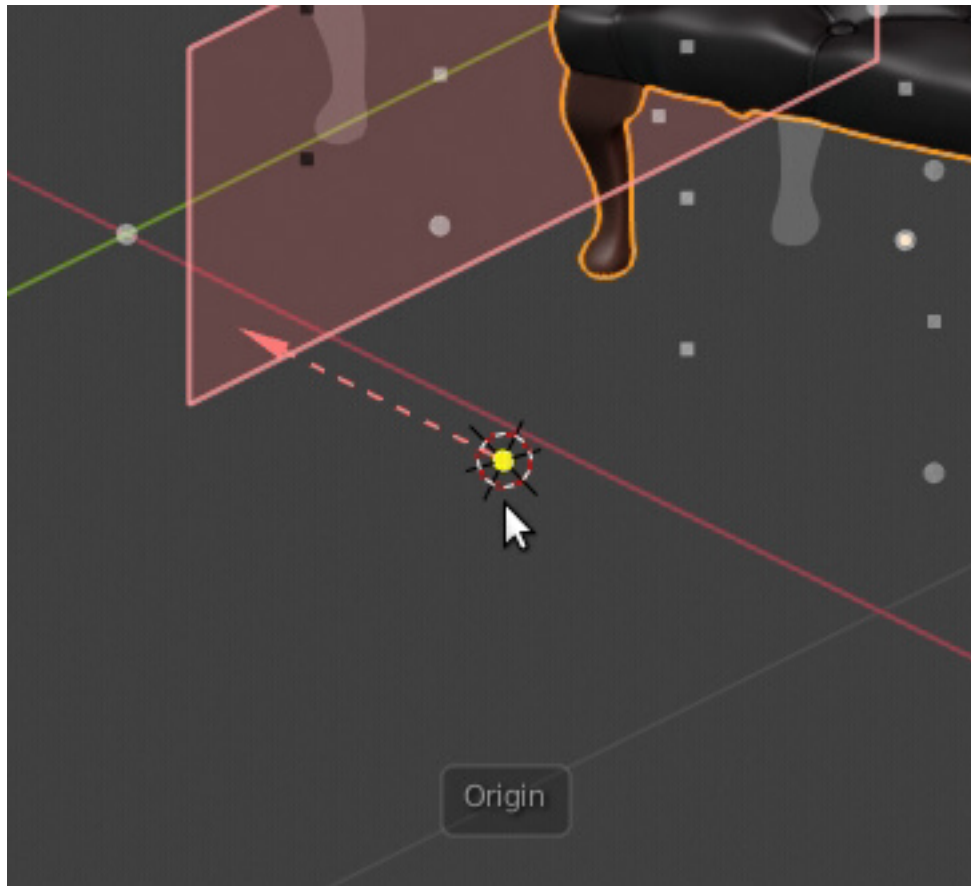Fig. 27: Selecting the Origin point from the current Selection of objects.

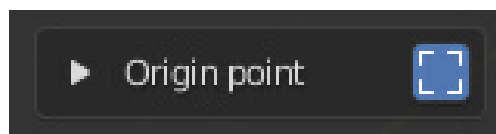Fig. 28: Selecting the Origin point from the cursor.
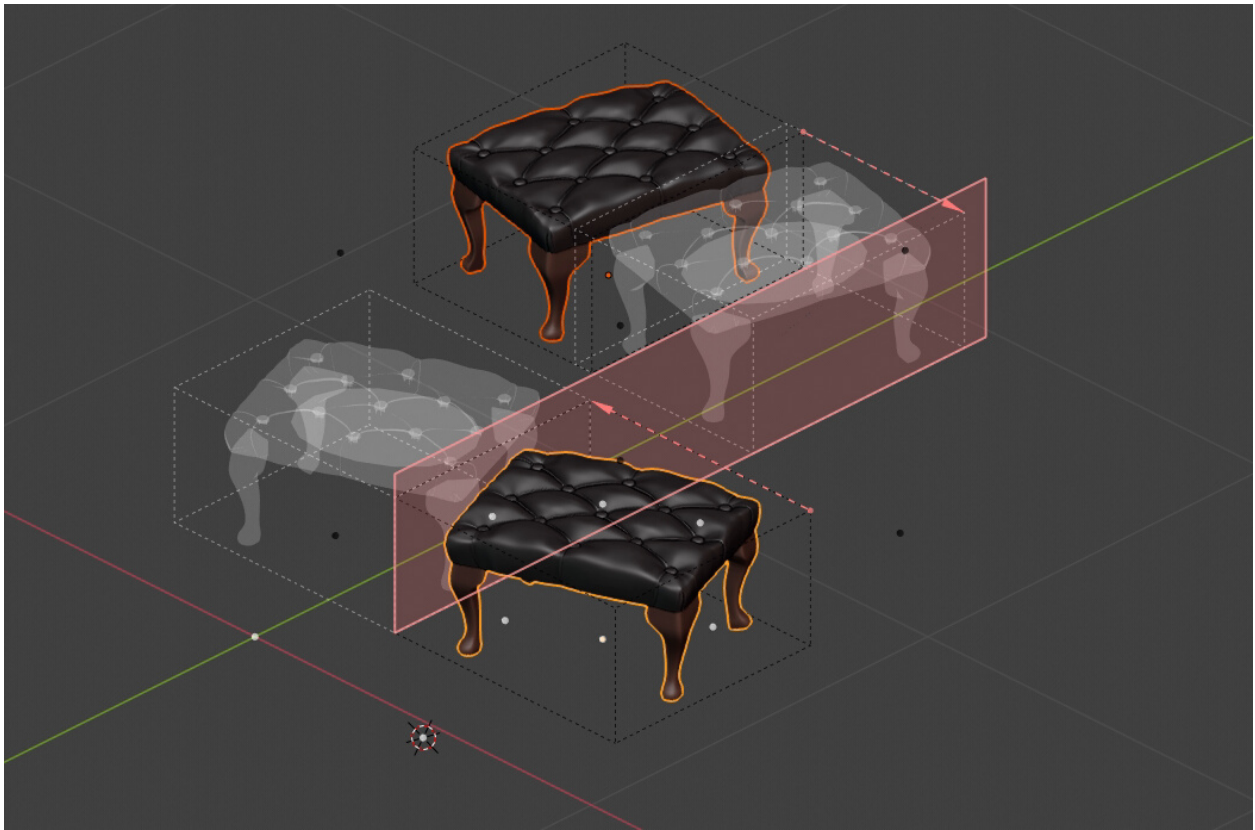

Fig. 29: The bounding box button enabled.
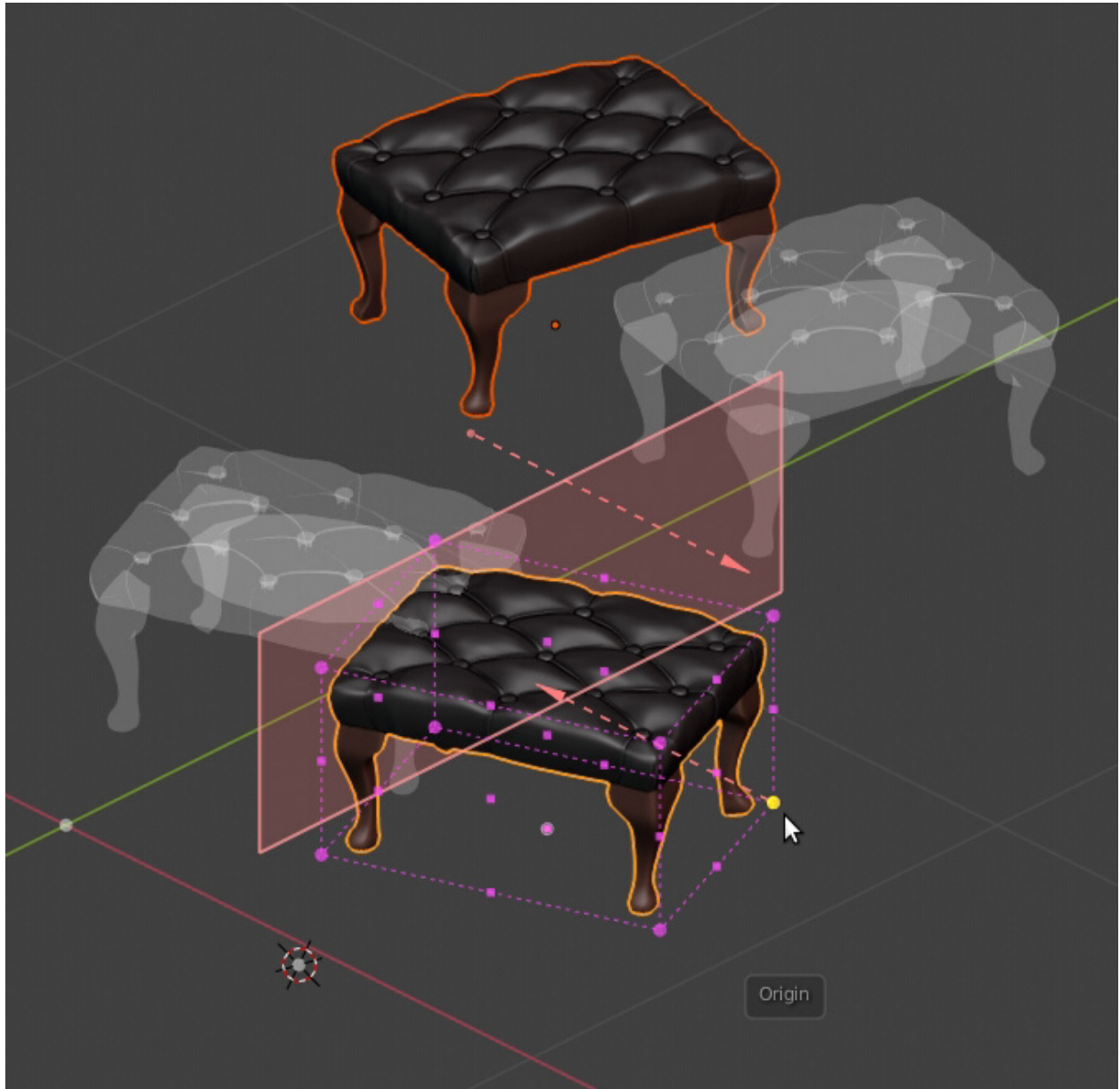
Fig. 30: The bound boxes being drawn.

Fig. 31: Selecting the Origin point from local bounds.

4.5.3 Selecting the Origin point from the basic bound box

You can use a more basic approximation to the object's geometry by using a **global** bound box that surrounds the **local** bounds of the object. This bound box ignores the object's geometry, which usually means that it doesn't always touch the object's surface.

To use this bound box, use the shortcut **Ctrl + G** or by disabling the **Use geometry** button in the **Origin point** panel from the Sidebar (**N**), when the origin **Target** is set to use the **Objects Bounds'**.

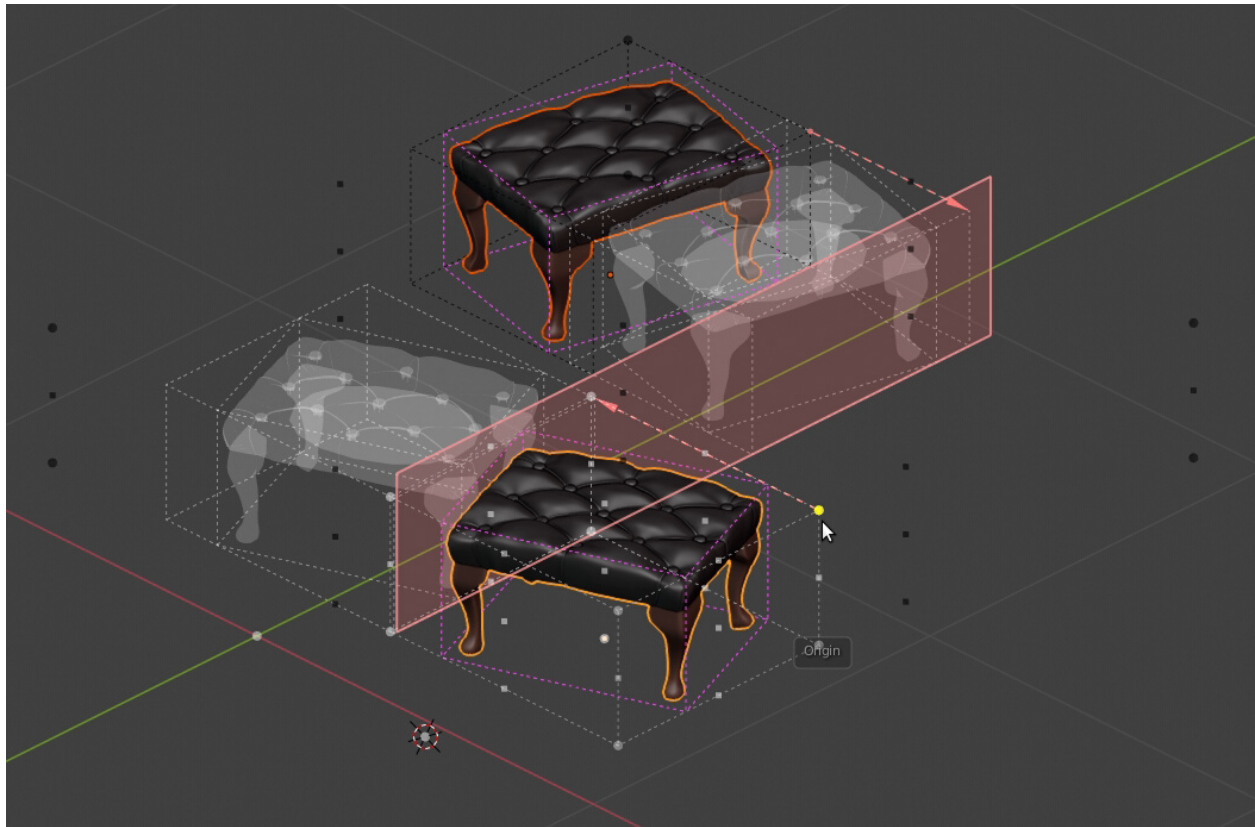Both **global** and **local** bound boxes are drawn simultaneously in this mode.

Fig. 32: Selecting the Origin point from the global bound box, while local bounds are also drawn.

4.5.4 Selecting a Custom Origin from Edit mode

If you have a mesh object and enter **Edit mode**, selecting the Align tool from the Toolbar, displays different options in the Sidebar (**N**). From here you can **Set** and **Remove** a **custom origin point**.

Fig. 33: The Set Custom Origin button shown in Edit mode.

You can use this as a **singular** origin for all your selected objects. All of them will start moving from this point. The origin is linked to the object, so moving or transforming it will make the origin follow the mesh.

When pressing the button **Set Custom Origin**, the vertex used is the active one, no matter if you have selected several of them. Once you have set the origin, the **Remove** button becomes available. Now the selected origin is drawn in the 3D view as a **green** colored point.

If you can't see the green point in Edit mode when you have already **set** the origin, it could be that you need to enable the **Show Gizmo** button in the 3D view. You can easily toggle that option with the shortcut **D**.

Using a **custom origin** for all your selected objects is different than using the option **All selected**, since if you use a **Local Direction** for displacement, you could project objects individually, moving them on their own axes, every one starting from the same point, but reaching to a different location.

You can reselect your custom origin point at any time from **Object mode** while you are in **Origin select mode** holding **Ctrl**.

When you have set a custom origin, you can find a new text line 'Vertex in:' with the name of the origin Object in the **Origin point** panel found in the Sidebar (**N**), replacing the origin options for **Objects**. From here you can also **remove** the custom origin at any time by pressing the little **X** button.

The custom origin is also lost when you get out of the Align tool both in **Object** and **Edit** modes. This is by design.

4.6 Selecting the Direction of projection

The Direction of projection is related to the translation of objects.

You can change the **current axis** for Direction interactively in the 3D view by using the shortcuts **X**, **Y**, **Z**.

The built-in orientations of **Pro Align Tools** for direction includes:

- **Global:** Translate objects in the axes of the world coordinates
- **Local:** Translate objects in the axes of the selected objects
- **View:** Translate objects in the axes of the current viewport space
- **Perpendicular:** Always translate objects perpendicularly towards the projection Plane (no axis used)
- **Custom:** Translate objects in the axes of any **Custom transform orientation** defined by the user

Some orientations for Direction can also be changed directly in the 3D view by using the appropriate shortcuts:

- **L:** Switch between **Local** and **Global** orientations
- **V:** Switch between the current **View** and **Global** orientations
- **P:** Switch between the **Perpendicular** and **Global** orientations

When you use the **Local** direction, you can choose between 2 different behaviours:

- Use the local direction of the **active** object for all selected objects: All directions are the same.
- Use the local direction of every object **individually**: The directions are independent for every object.

4.7 Adding a Custom Orientation

To manually add a **Custom orientation** to use with **Pro Align Tools**, you can select the elements from where you want to take an orientation, both in Object or Edit modes and then click the **Transform Orientations** dropdown menu
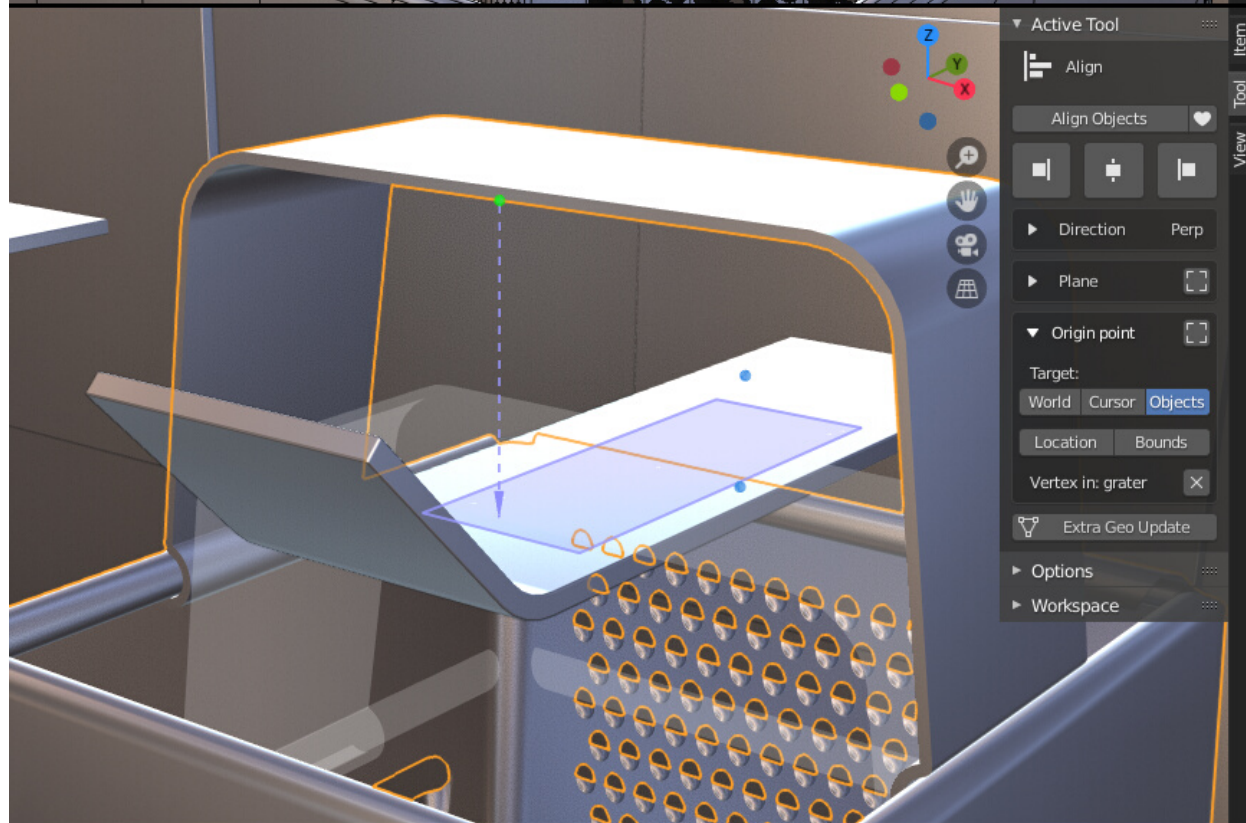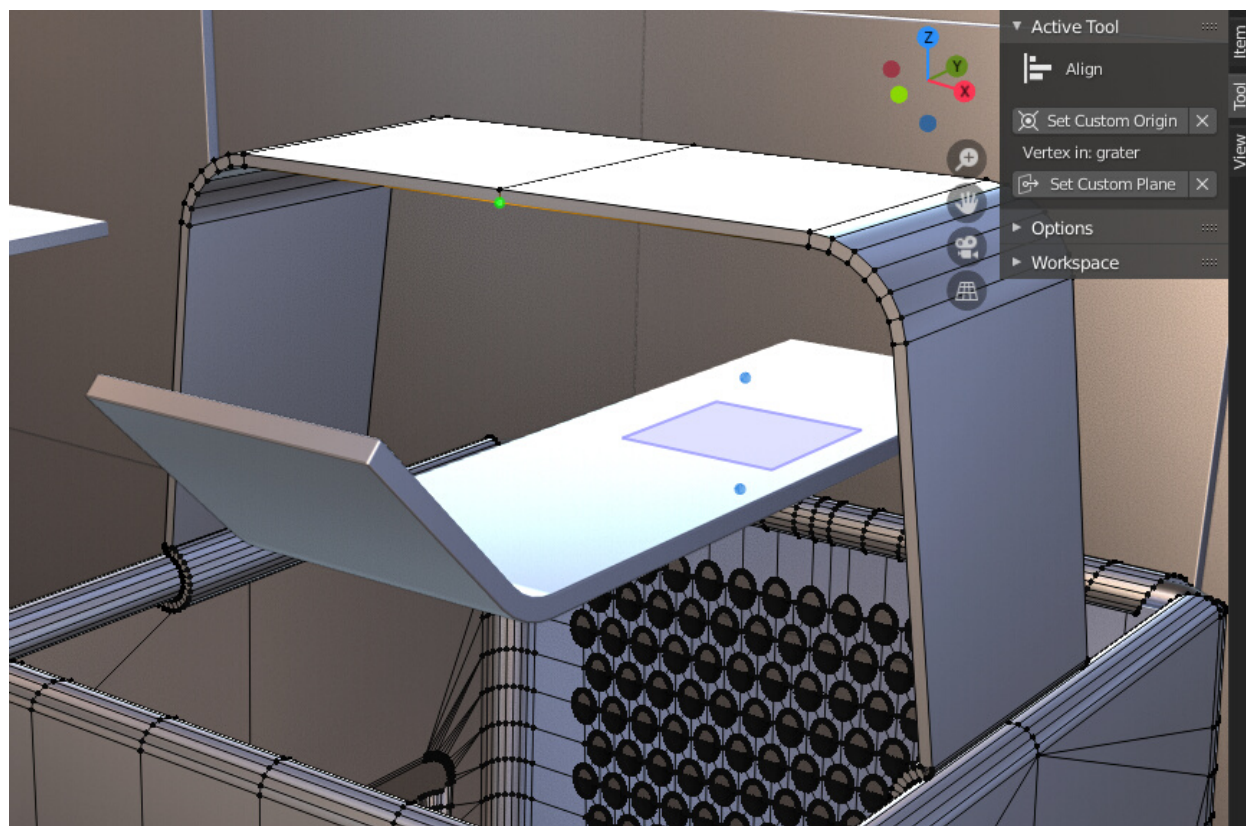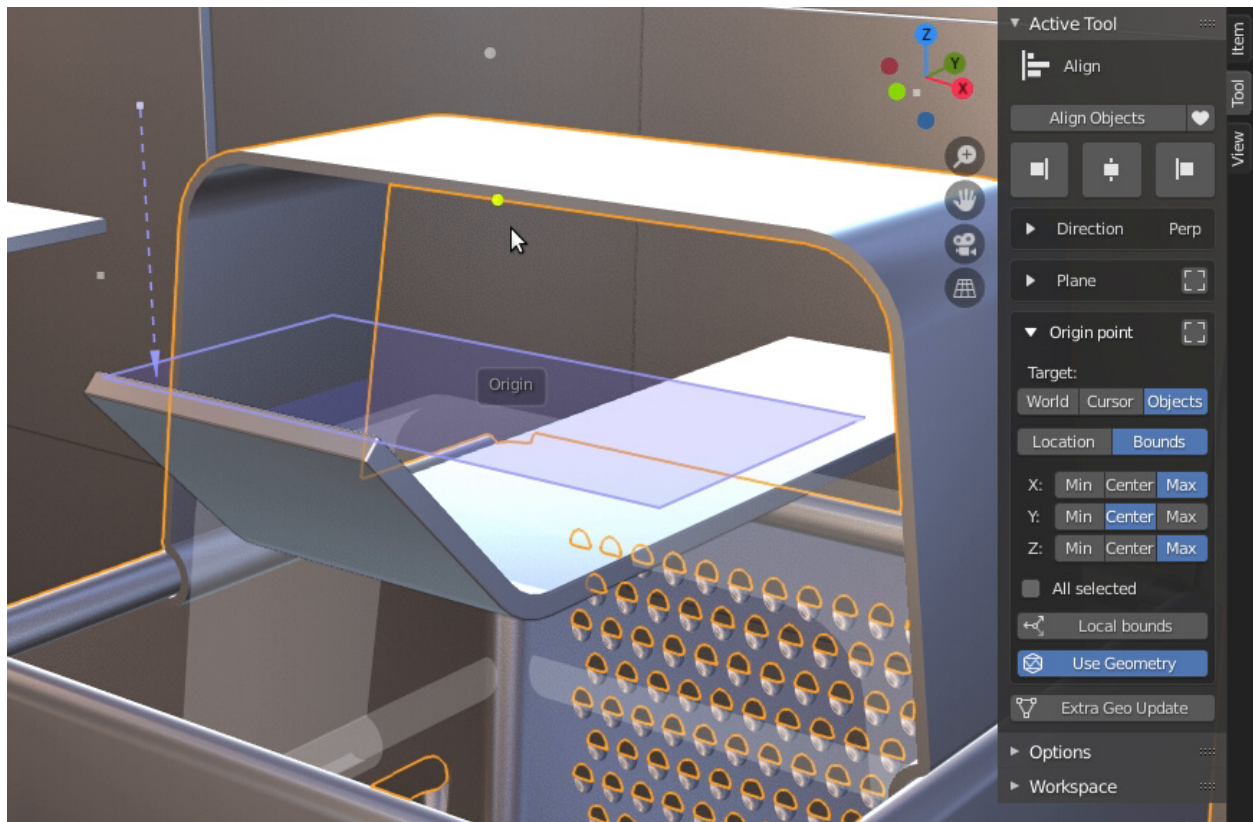
4.7. Adding a Custom Orientation

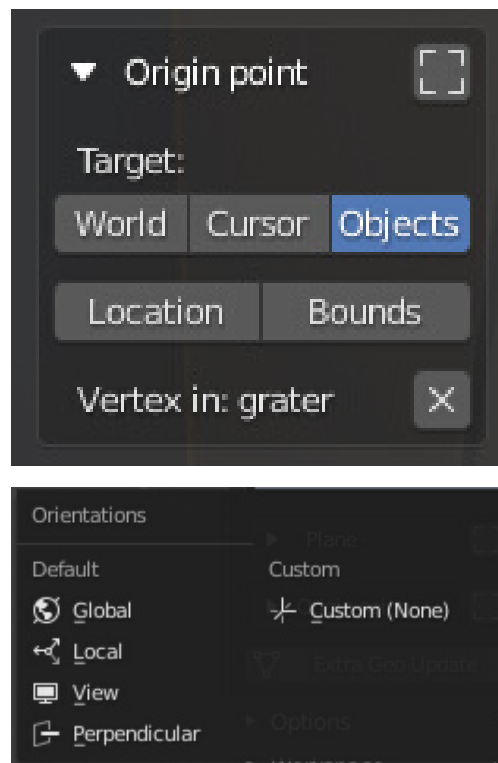Fig. 35: Reselecting the custom origin point in Object mode.

Fig. 36: The built-in Direction orientations of **Pro Align Tools**.

found in the 3D view, from where you can create a new **Custom orientation** by clicking the **+** icon. Optionally, you can call the **Create Orientation** operator from the operators Search menu with the shortcut **F3**.
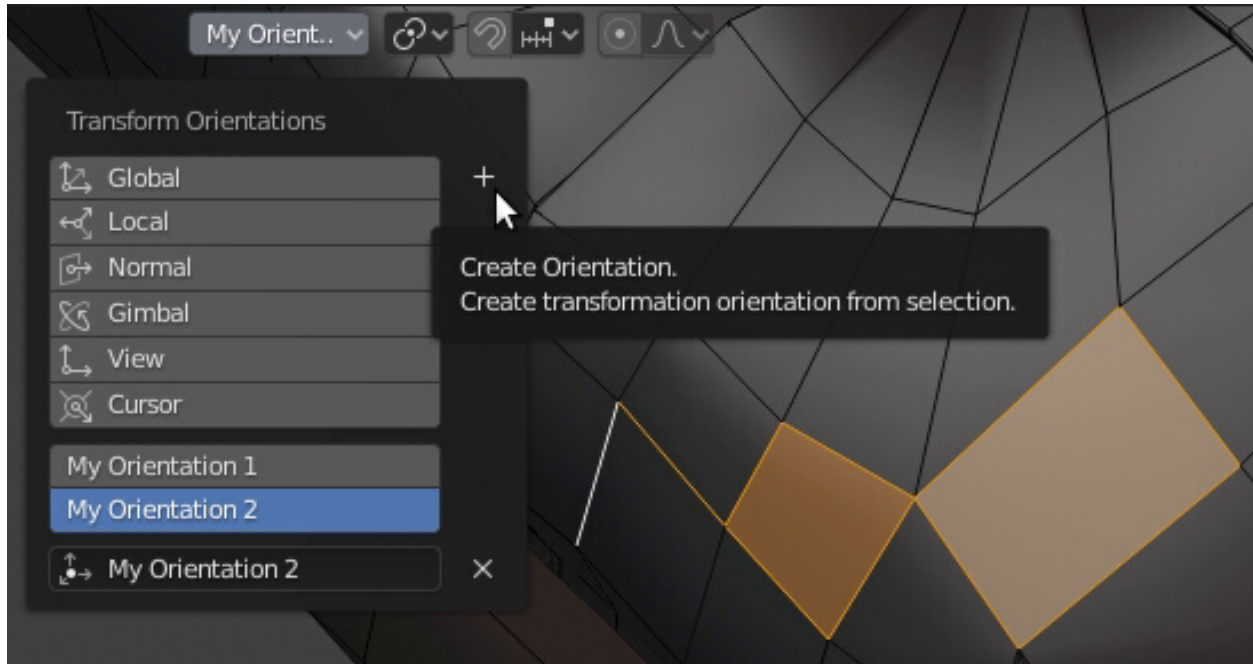

Fig. 37: The Transform Orientations dropdown menu in the 3D view.

The operator is sensitive to current selection, so it will take your selected elements and will create an orientation based on that.

Once you have your custom orientation defined, you can make use of it whenever you have one of the custom orientations **selected** in the **Transform Orientations** menu. This means that though you may have many orientations defined, you can only make use of one at a time by selecting it in the **Transform Orientations** menu. **Pro Align Tools** displays only one entry to use a custom orientation.

You **cannot** use any of the built-in orientations that come with Blender as a custom orientation. If you select one of these, the **Custom** orientation in **Pro Align Tools** will display **(None)** and behave as if it was just a **global** orientation.

4.8 Status bar

The Status bar provides information about the **current state** of **Pro Align Tools**. It is updated whenever you change something relevant, whether by clicking some button in the Sidebar or by using the shortcuts.

The Status bar informs about the three main concepts of an alignment: **Direction**, **Plane** and **Origin**.

The Status bar replaces the default shortcuts bar of Blender 2.8x. It is always visible until you get out of the Align tool in both Object and Edit modes.
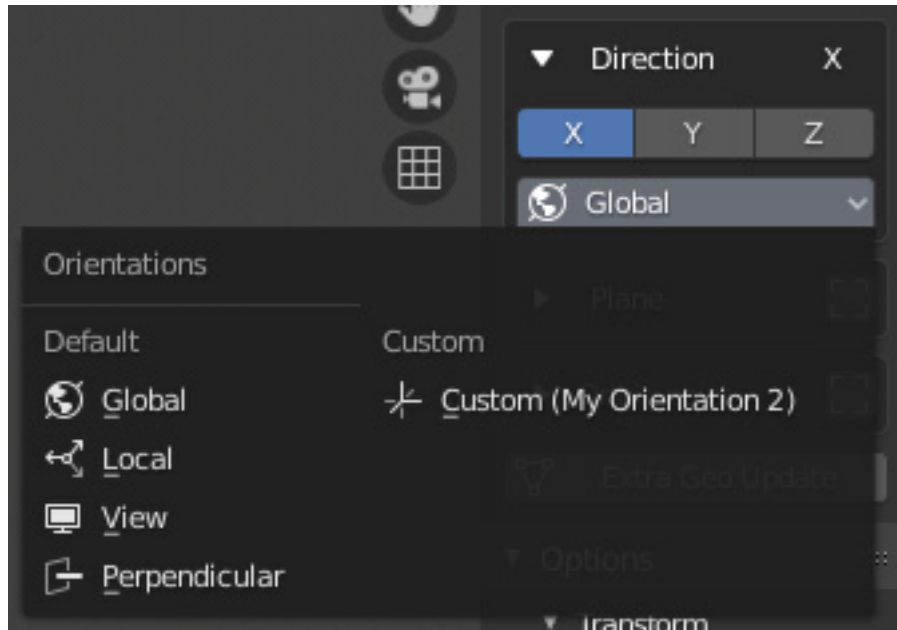
Fig. 38: The current Custom orientation displayed in **Pro Align Tools**.

Fig. 39: The Status bar at the bottom of Blender 2.8x interface, replacing the shortcuts space.