**Getting Started - Chapter 7 - Adding Shadows**

**@@启程-第七章-添加阴影@@**

**Adding Shadows**

**@@添加阴影@@**

The light we have been using so far, the *HemisphericLight* gives an ambient background light and is not suitable for producing shadows. We could use the lamp spot lights however the shadows they produce can be faint and so we will introduce a directional light.

@@到目前为止我们使用的光源——半球形光源，产生的是一种背景环境光，它并不适合用来产生阴影。我们也可以使用路灯的锥形光源，但它们产生的阴影过于微弱，所以我们将介绍方向光源。@@

const light = new BABYLON.DirectionalLight("dir", direction, scene);

As usual the direction is a vector3 and the scene parameter is optional.

@@和以前一样，方向参数是一个三维数组，而场景参数可以省略。@@

Setting its position will affect the direction and length of any created shadows.

@@设置它的位置属性将影响所有已经建立的阴影的方向和长度。@@

light.position = new BABYLON.Vector3(0, 15, -30);

Shadows will only appear when a *ShadowGenerator* object is created, a mesh casting the shadow is given and the mesh on which the shadow will be cast is set to receive shadows.

@@阴影只有在建立了一个“阴影生成器”对象后才能呈现，同时必须给定一个投射阴影的网格以及一个接收阴影投射的网格。@@

const shadowGenerator = new BABYLON.ShadowGenerator(1024, light);

The first parameter is the size of a shadow map and the light generating the shadow.

@@第一个参数是阴影图的尺寸（越大则阴影分辨率越高），第二个参数则是生成阴影的光源。@@

We also need to add a mesh that will cast the shadow.

@@我们还需要添加一个投射出阴影的网格。@@

shadowGenerator.addShadowCaster(casting mesh, true);

The optional second parameter, which has default value false, will add any children of the mesh to the shadow caster.

@@第二个参数是可选的，这个参数默认为false，他表示是否将这个网格的子元素也作为阴影投射者。@@

Finally we also have to tell the mesh on which the shadow is cast to receive it.

@@最后我们还需要通知被投射阴影的网格，接收阴影。@@

receiving\_mesh.receiveShadows = true

In our case we need, at appropriate positions

@@在我们的例子中，我们要在合适的位置加上：@@

const shadowGenerator = new BABYLON.ShadowGenerator(1024, light);

shadowGenerator.addShadowCaster(dude, true);

ground.receiveShadows = true;

Adding Basic Shadows

添加基础阴影

https://playground.babylonjs.com/#4G38H4#7

Putting this, with suitable value adjustments, in our world gives

@@经过合适的参数调整后，把这些放在我们的村庄世界中，产生如下效果@@

Shadows in the Village

村庄中的阴影

https://playground.babylonjs.com/#KBS9I5#96

So far we have had only one way to view our village world. There are other possibilities with different cameras.

@@目前我们只有一种观察村庄世界的方式。通过使用不同的相机，我们能发现更多可能。@@