Black & White
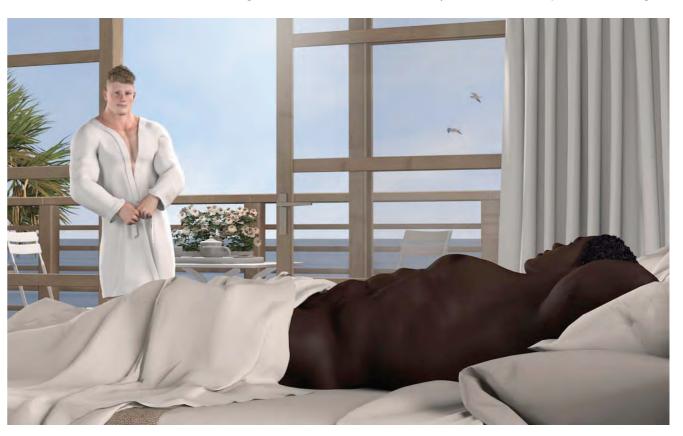
Working in 3D gives you unlimited possibilities to create your own world and each project starts a bit like Genesis; after creating space and form - let there be light! And a whole new scene comes to life. Setting up great lighting is an important part of any production.

Lighting plays a key role in rendering quality and making things look believable and realistic. After completing the set, it's the lighting of the scenes that takes most of the time in creating the series.

It's the contrast of light and shadows that sculpt the shapes and it defines the atmosphere or mood of a scene. To experiment with this I placed two contrasting characters into two different light settings - day and night. I've been looking quite a while for a suitable dark character and, to my surprise, It appears that it takes a whole different approach to render such a model. To illuminate these two different skin tones simultaneously was therefore quite a challenge.
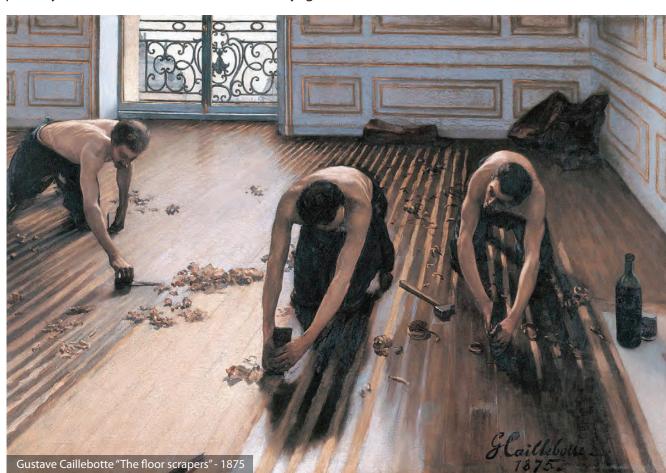
Rembrandt "Self-Portrait with Two Circles" - 1665

It's all about light

I've always been impressed by the use of light in art and several famous works continue to be an inspiration. Artists like **Caravaggio** and **Rembrandt** were masters in creating dramatic effects by skilfully highlight specific points in their compositions. Impressionist explored how the sunlight interacts with its surroundings, emphasized passing moments by capturing the varied colorations of light at a single point in the day. A nice example is the painting "*The floor scrapers*" by **Caillebotte**. The main source of daylight

Caravaggio "Saint John the Baptist in the Wilderness" - 1604

from the back of the scene illuminates the room, its reflection accentuates the unscraped parts of the floor and the bodies of the workers are carved out with soft shadows, accentuated with highlights on their backs. It's a beautiful impression of a random moment, caught by the light and frozen in time.

Gustave Caillebotte "The floor scrapers" - 1875

Edmé Bouchardon
"Cupid Cutting His Bow from the Club of Hercules " - 1750

Ian Spriggs "Portrait of David Spriggs"

Like a real sculpture in marble, it's light and shadow that shapes the forms in 3D. It's like sculpturing into a whole new reality, where the possibilities seem to be endless. You don´t need a whole studio and loads of very expensive equipment to achieve some astonishing results.

Maximilian - Gordon Vogt "Study of a male figure"

What you do need to start is the right software and some skills, and lots, lots of time and patience. While there are many things that play into the quality of a render, things like materials, textures, and an endless amount of parameter settings, lighting is something that must be set up just right to achieve the desired effect.

I've been experimenting with light from the start and with every series I'm tinkering with the settings to obtain the best possible result.

By now I've developed some standard to work with, but at the end of each project, I always think I can do far better!

The scene below illustrates the light settings I used for the *"Black & White"* series. It's based on the standard used in real photography, with some additions to illuminate side and back. The darker model had some extra lights as well -

in 3D you can isolate the objects - and for each scene, all settings had to be adjusted again.

In this project I didn't use the so-called Global Illumination for the rendering; it's quicker and it gives more control over the shadow effects. Therefore I had to add some extra light sources and in most of the scenes, the background is illuminated separately.

At the end of the process, the render results are always a bit disappointing, for they are always very dark and the colors are mostly flat and gray. So the final result only comes to light when some major adjustments for brightness and contrast are done in Photoshop. I've also noticed that different browsers and photo view software have a huge impact on the quality of image display, often reducing hard obtained subtle shadows and light effects into a blurry dark mess.

I often see a 3D artist who do really good work, spending lots of time in developing their characters and scenes, but only use very standard light settings for their renderings. Especially when it comes to adult stuff. That's a pity, for I'm sure that with a little more effort they could have added so much more to their image.

On this page I propose some works by *Qisheng Luo.* They really are wonderful examples of what can be done in 3D. The boundary between real and digital is becoming very thin indeed.

Also very inspiring is the sense below. It's a random selection of artists who really know what they're doing when it comes to using light in 3D. These guys do astonishing work, archiving mind-blowing results, using techniques and stuff I can only dream about.

The scenes were picked at random during a one hour search on the *CGSociety.org* website and it illustrates the amount of talent that's out there in the digital world.

Juan Siquier "A little farther to the right"

Cornelius Dämmrich "Haze"

Sam Morle "Model Maker Table"

Glazyrin "Woodworker"

Anthony Eftekhari "The Beach"

James Gardner "Typewriter Underwood"

Tamas Medve "Heavenly Light"