

This Renaissance-Era Marble Was Carved By a Robot

Written by DJ Pangburn - Jul 31, 2015

The last time we heard from visual artist Jonathan Monaghan, he was taking viewers on a gleaming virtual reality trip through a golden stag's anus in Escape Pod. For his latest project, Agnus Dei (After Zurbarán), Monaghan returns to the animal kingdom as the starting point for his artwork, but without all of the Freudian surrealism.

As the artist tells The Creators Project, Agnus Dei (After Zurbarán) is based on Francisco de Zurbarán's Agnus Dei The Lamb of God, a 1635 painting of a bound lamb. Using the lamb's general shape and position, Monaghan created an abstracted version of the subject with 3D modeling software.

"I wanted to render the symbolic animal life-size in marble and with an ornamented couch-like skin to conjure notions of a kind of bondage by technology and materialism," says Monaghan, who undertook



All images courtesy of the artist.

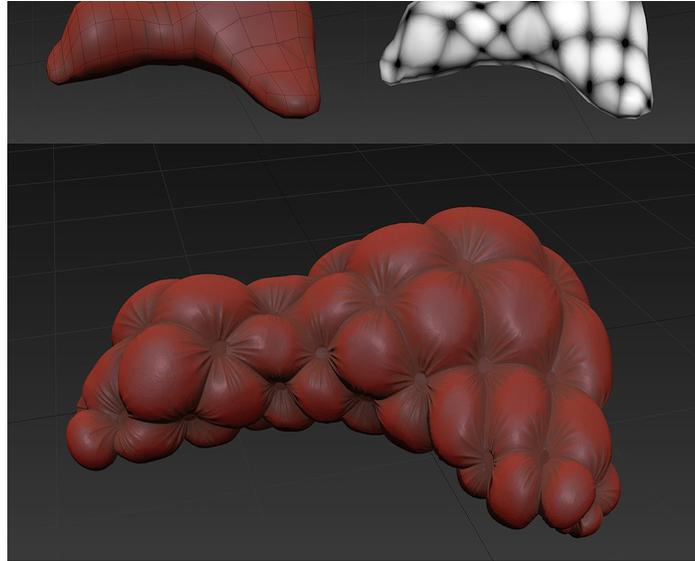


Agnus Dei (The Lamb of God) by Francisco de Zurbarán

Once Monaghan 3D-modeled his abstracted Agnus Dei, he emailed the design to the Digital Stone Project Workshop's partner organization Garfagnna Innovazione, located in a traditional marble carving region in Tuscany, Italy. He got to employ the workshop's 7-axis milling machine robot carving his design in Carrara marble, the very same marble used in ancient and medieval sculptures

As Monaghan notes, the robot slowly cuts away at the marble with a diamond tip tool bit, going smaller and smaller as details require.

“First the robot blocked out the form, then did a rough pass, and a final detail pass,” Monaghan says.



3D modeling of Agnus Dei (After Zurbarán)

“This process left me with a pretty good marble form, but it needed a month of hand finishing to eliminate the milling lines. After I sanded the sculpture down to a smooth surface, I affixed 3D printed stainless steel ornaments to the marble.”

“In my work, there is always a blurring of meanings and realities, such as creating photo-realistic videos which are completely computer-generated,” Monaghan adds. “So it’s important in my work to use the virtual world in some way. The CNC milling process keeps the work in the digital realm, and it also offers access to a medium that would otherwise be difficult for me.



Robot carving Monaghan’s sculptural form, courtesy of the artist.
The Digital Stone Project Workshop’s robot adding fine detail to the sculpture.



After Jonathan Monaghan sanded the sculpture.



The sculpture with finish and ornamentation, courtesy of the artist.

Monaghan's Agnus Dei (After Zurbarán) sculpture is currently on exhibit at the Villa Strozzi in Florence.