# CHAPIER 6

**3D TECHNIQUES** 

"FROM THE BEGINNING OF MY ABSTRACT WORK, EVEN WHEN IT MIGHT NOT HAVE SEEMED SO, I FELT THERE WAS NO BETTER MODEL FOR ME TO CHOOSE THAN THE UNIVERSE."

ALEXANDER CALDER

#### IN THIS CHAPTER

We explore a simple sculpting technique invented by Mark Jenkins to produce more dynamic artwork by casting any object, or even a human body. Follow the steps in the tutorial and "tape up" something that you like or are familiar with. Once you master the sculpture steps outlined in this chapter, you can add interactivity and more media into your piece. Moving images can be displayed on still murals to enhance the experience. Multimedia suggestions, including information about video and kinetic art, are included at the end of this chapter.

### **HOW TO MAKE SCULPTURES USING PACKING TAPE**

## By Mark Jenkins

The following steps are also available at Tapesculpture.org. This helpful website is the ultimate resource for learning how to cast objects using packing tape. It contains photos and videos of packing tape sculptures that have been created by artists from all around the world. Things You'll Need:

- An object such as a doll\*.
- Plastic wrap (cling film)
- Packing tape or hobby knife
- Scissors
  - \*If you would like to cast a person, make sure you are supervised by an adult.



Step 1: Wrap the object (the doll) with the cling film to create a transparent sculpture. There are also colored films available. Keep in mind that the final sculpture will have the color of the film. You can also experiment with multiple colors or add small objects or glitter to create special effects and textures on your final sculpture. Make sure that every piece of the object is fully covered with the cling film.



**Step 2**: The next layer of wrapping is done with the packing tape. Depending on the size and details on your object, you may cut the packing tape into smaller pieces in order to cover the sculpture. More than two or three layers are necessary in order to make a sculpture that lasts. For extra durability, add more layers.



**Step 3:** Take a hobby knife or a pair of scissors, make an incision into the cast layer, and cut a seam. Release the object and remove any excess cling wrap from inside. At this point you can reuse the object again and tape up another copy.



**Step 4**: Once the object is removed, match up the seams and tape them together with smaller pieces of packing tape. The cut should be almost invisible if the seams are matched and taped up properly. Enforce the cast by adding additional layers of tape.

# ENHANCING PACKING TAPE SCULPTURES:

You can experiment with the cast and see if it's possible to personalize the technique. Can you add objects or images between the layers of



Installation of this Mark Jenkins' sculpture on a roof near the Convention Center in Washington DC resulted in its removal by the fire department after many phone calls from concerned pedestrians.

tape? Can you fill the hollow tape sculpture with anything? Can you add lights or sounds? Be creative. This technique gives you the freedom to create sculptures using tape and tools that you can find in your home.

#### **ADDITIONAL RESOURCES:**

www.flickr.com/groups/tapesculpture/pool/ www.tapesculpture.org

## VIDEO INSTALLATION ART By Andrew Wilkinson

Video art is a type of art which relies on moving pictures and is comprised of video and/or audio data. (Itshould not, however, be confused with television or

experimental cinema). Video art came into existence

during the 1960s and 1970s, is still widely practiced, and has given rise to the widespread use of videoinstallations.

Video art is named after the video tape, which was most commonly used in the form's early years. Before that, artists had already been working on film, and with changes in technology, Hard Disk, CDROM, DVD, and solid state have superseded the video tape as the carrier. Despite obvious parallels and relationships, video art is not film.

One of the key differences between video art and theatrical cinema is that video art does not necessarily rely on many of the conventions that define theatrical cinema. Video art may not employ the use of actors, may contain no dialogue, may have no discernible narrative or plot, or adhere to any of the other conventions that generally define motion pictures as entertainment. This distinction is important, because it delineates video art not only from cinema but also from the subcategories where those definitions may appear to cross over, as in the case of avant garde cinema or short films.

Perhaps the simplest, most straightforward defining distinction in this respect would be to say that cinema's ultimate goal is to entertain, whereas video art's intentions are more varied and simply explore the boundaries of the medium itself.

# ADDITIONAL RESOURCES TO EXPLORE:

www.videoart.net www.rhizome.org www.perpetualartmachine.com

#### **EMERGING ARTISTS:**

www.tedvictoria.com/ www.arwilkinson.com/ www.santalope.com/ www.leewells.org/ Video Art

#### **ARTISTS:**

Paul McCarthy Bruce Nauman Shirin Neshat





Leon Rainbow is painting a sculpture by Jonathan Shor during Street 2K8 festival as a part of their collaboration. Since then, the sculpture has been repainted many times, maintaing the dialogue between the sculptor and painter.

# KINETIC ART By Rein Triefeldt

Kinetic art is a term used to describe an international movement that includes artworks of virtual and actual movement. The motion of the work can be generated by: human force; relying on the spectator to provide the motion by doing something such as cranking a handle; by utilizing natural phenomena and natural power such as sun, wind and wave action; mechanically through electricity, steam or clockwork; integrating light, optical illusion and sound effects; or exploiting the movement of the spectator. In kinetic art, the term movement is defined to make the definition of movement adaptable to typically kinetic two dimensional, relief-like or light- or sound-kinetic works. Movement in kinetic art is actual or virtual motion, and is primarily about change and transformation.

Historians believe that kinetic art has been around since ancient Egypt. The Great Pyramid of Cheops near Cairo was constructed so that surface objects in relief sculpture were made of many elements, each capable of casting an individual shadow on the south face of the Pyramid. This results in the formation of figurative shadow images at sunset during the spring equinox. Automata sculptures are forms of kinetic art popular in Europe in the late 19th century. In Automata, a hand-cranked device is employed to drive a mechanism to animate a scene. They are the sophisticated precursor to robots.

Modern kinetic art appeared in Russia with Constructivism around 1913. Constructivist art refers to an optimistic, non-representational sculpture, kinetics and painting. The artists did not believe in abstract ideas, rather they tried to link art with concrete and tangible ideas. Additionally, Dada and

Surrealism played a roll in developing kinetic art. In the 1920s European artists Naum Gabo and Laszlo Moholy-Nagy began to experiment with kinetic sculpture that resembled machines. Shortly thereafter the American

Alexander Calder created the mobile, constructed of delicately balanced wire armature from which sculptural elements are suspended. It is during this time the theoretical basis of kinetic art was formed, though just few actual artworks were created due to the technological difficulties.

Kinetic art flourished in the 1950 and 60's after World War II. Kinetic artists became interested in creating works of art that related to the environment and the spectator. These artists desired to overcome a gap between modern art and the viewer. They did this by creating works that raised interest and attention by involving the viewer in an interactive relationship. It is during this time Optical, or Op Art emerged. Op Art aims at creating the illusion of motion. Their work surfaces vibrate and pulsate with visual rhythms based

on line and color contrast with a technique of mechanical precision. Op Art adapted theories such as wave-technology, theory of relativity and astrophysics into their work. The use of light in kinetic art (natural or artificial) can be either a constructive part of the work itself or can come from an outside source. It has a purpose of embracing the surrounding environment around it, dematerializing the objects and in some cases completely replacing them, such as kinetic artists experimenting with holograms and lasers.

As technology and science developed rapidly in the second half of the twentieth century, certain ideas and practices soon became out of date and new ones emerged. Similarly, as kinetic art evolved, materials advanced over the decades; aluminum and glass were soon replaced by iron, steel, plastic and clear acrylic, gears and bearings, electric motors and automatic programs. Kinetic art operated by electric motors, pneumatic, magnetic, automatic devices, where the motor is either hidden away from the





Artist Roger Cutler plants sunflowers to create living fields of color in neglected areas.

spectator or openly revealed. At the moment, the use of high-tech materials such-as carbon fiber and other laminates make sculptures lighter and stronger than ever. Moreover, new paints allow color to shift as the spectator moves around the sculpture, and electronics allow anyone with a cell phone or web browser to remotely change the direction or color of the kinetic art. Today, new material science allows kinetic artists to build larger, much more complex moving structures than ever before. Kinetic artists are experimenting with light, optical effects, fiber optics, RGB-LED's, remote sensors and photovoltaic (solar) modules.

In 2000, Rein Triefeldt received an email from Bernward Frank in Germany, inviting Triefeldt to a kinetic art symposium in Germany. Although he had to pay out of his own pocket, Triefeldt traveled to Germany and thus began his professional journey with Frank. They visited many kinetic artist studios in Germany and then traveled together to Geneva where they met with Ralfonso Gschwend at his home on Lake Geneva, Switzerland. The first evening in Geneva, the three artists founded the Kinetic Art Organization. The Kinetic Art Organization has grown to more than 1000 members in 60 countries. It has supported numerous international kinetic art exhibitions such as: Art in Motion: Dutch Biennale curated by Cor, Wetting, Leewerden, Netherlands, 2003; Kinetic Art Image Exhibition in collaboration with Chinese Library of Science, Beijing, China, 2005; and Momentum, curated by Brooke Barrie, Grounds for Sculpture, NJ, USA, 2006; to name a few.



Peter Krsko smoothing out small imperfections on sculpture of a giant hand. These sculptures were created from insulation foam and reproduced using fiberglass molding.

For more information visit: www.givemeavotre.org

#### **QUESTIONS:**

- 1. What is your vision for your project?
- 2. What is your suggested name for this project?
- 3. What are your interests related to this project?
- 4. Why is it important to think of all costs before you start painting?
- 5. How would you deal with the situation of not being able to get water on your mural site?

#### **ACTIVITIES:**

- Identify all the materials in the kitchen and garage of your house that you could use for making sculptures. Do you need any tools? Write the list of the objects and draw your concept for the sculpture.
- Repeat the same exercise, but go outside. What do you find in your 2. backyard, park, on the street, or in a hardware store that you could use for making sculptures?
- Find all the sculptures in your neighborhood. Are there any? What are 3. they of and what do they represent?

GOING PUBLIC: THE GUIDE TO CREATING ART IN PUBLIC SPACES

## **NOTES**

USE THESE PAGES FOR RESEARCH/SKETCHING

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#### **SUMMARY:**

Sculptures are an important part of our public space. Murals are more common, mostly because of the skills required to produce one and the cost associated with creating a sculpture. However, in this chapter we have presented a simple and accessible method that anyone can use to produce a three dimensional work of art. The experience can be additionally enhanced by incorporating other media such as video and music. There are no limits to combining various approaches to artwork that will truly materialize vour ideas.

