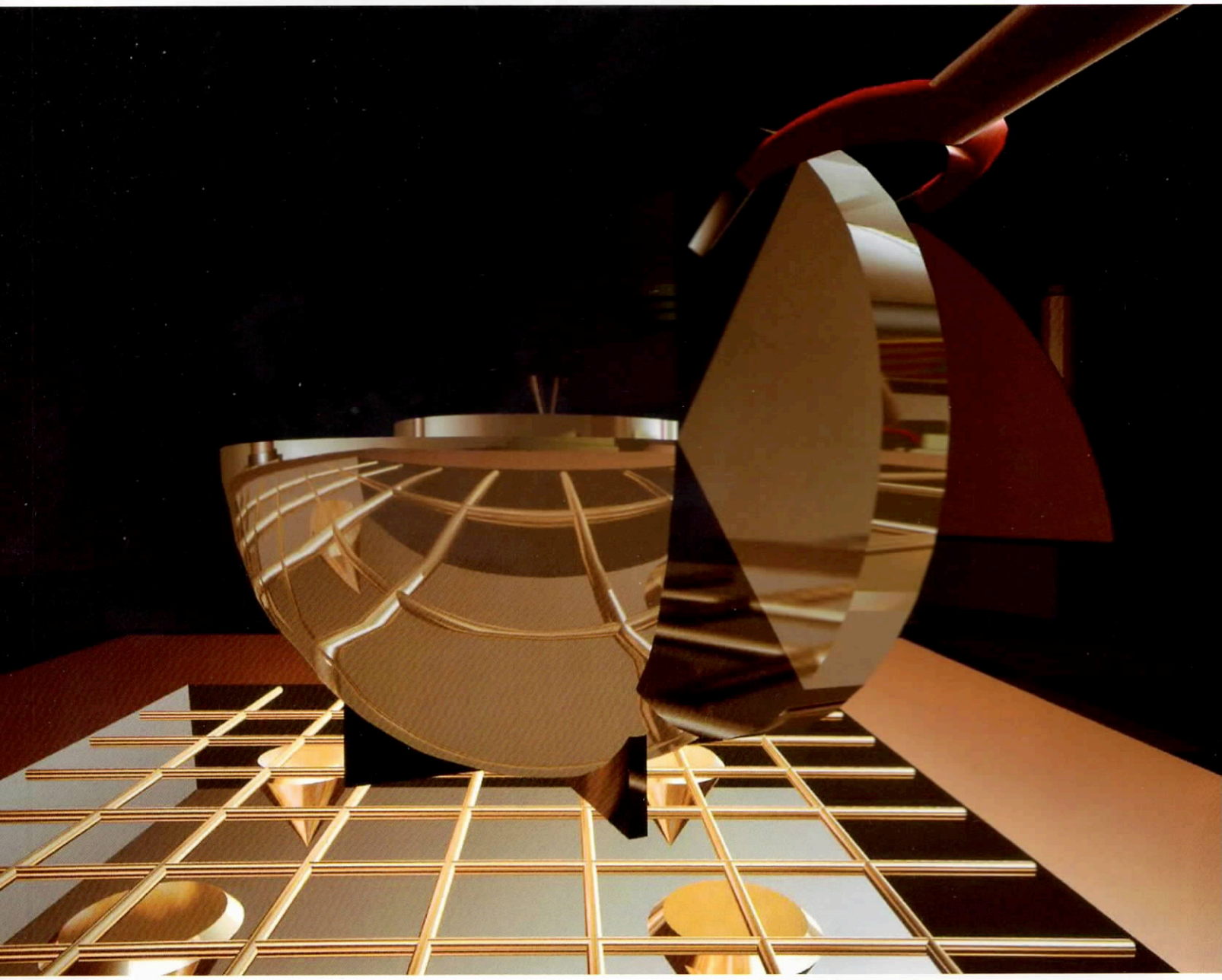
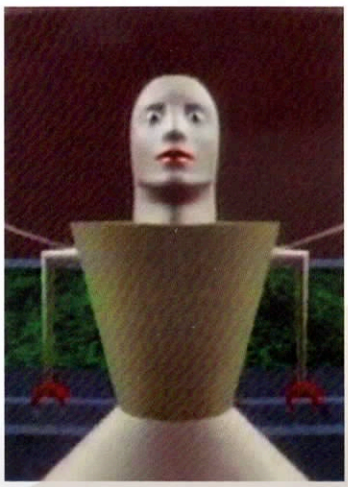


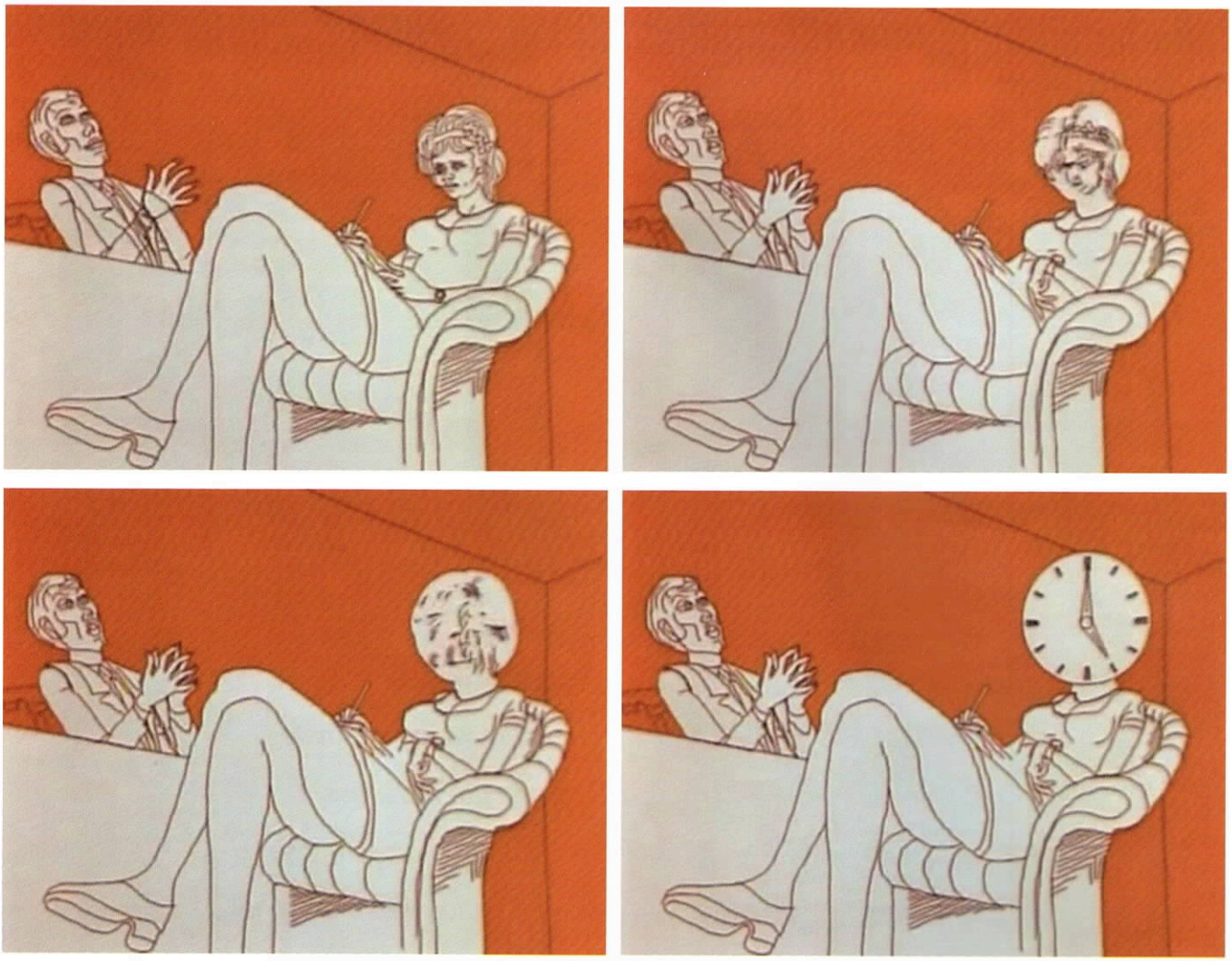
ON *POLLY GONE* (1988)

AN INTERVIEW WITH SHELLEY LAKE

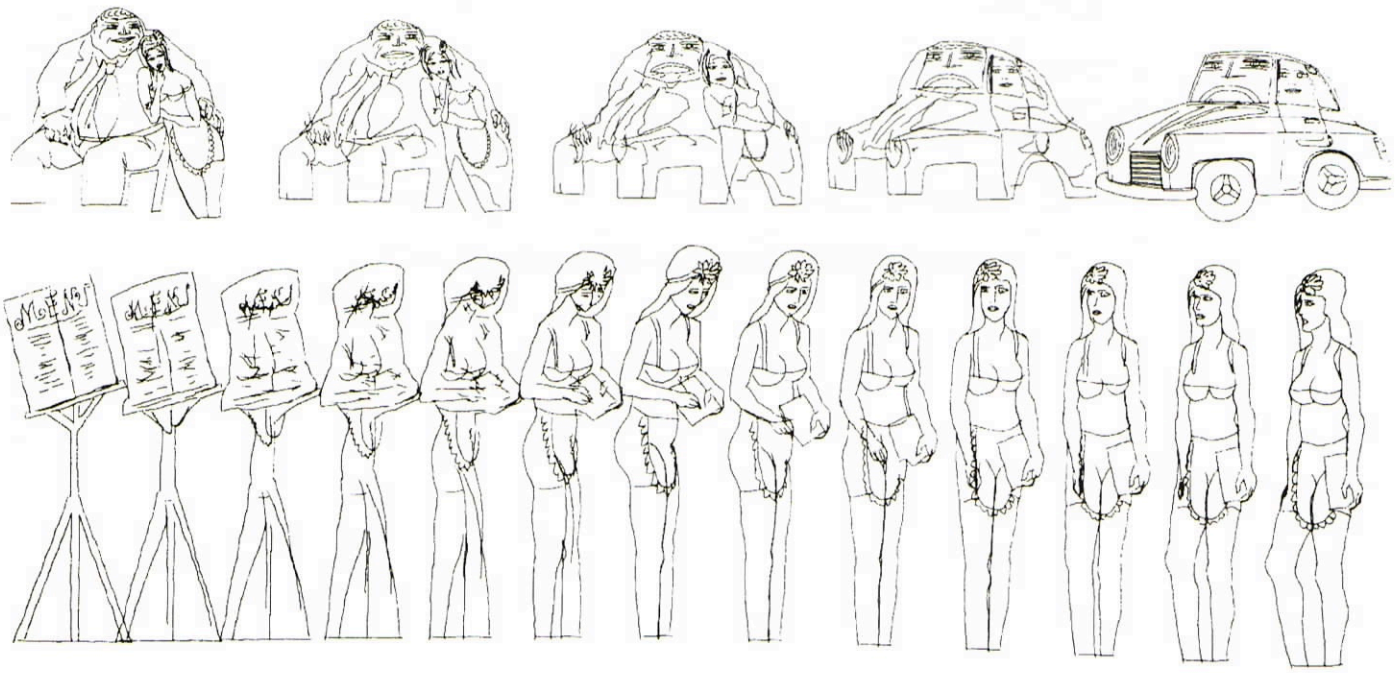


Polly Gone is a 1988 digital animation in which a female robot speeds around her futuristic home doing various errands, all while a horror movie soundtrack with synthesized beats plays in the background. The animation was a personal project of Shelley Lake, an artist and animator who was the first female graduate of the Architecture Machine Group (later to be known as the MIT Media Lab). Lake studied with Nicholas Negroponte, Aldo Tambellini, Muriel Cooper, Otto Piene and Harold Edgerton, and went on to receive a Clio award, Photoshop Guru award, and Japan's NICOGRAPH award. She was also the technical director for the 1984 Academy Award winning film, The Last Starfighter. The following is an email interview with Shelley Lake.

– Jenny Odell



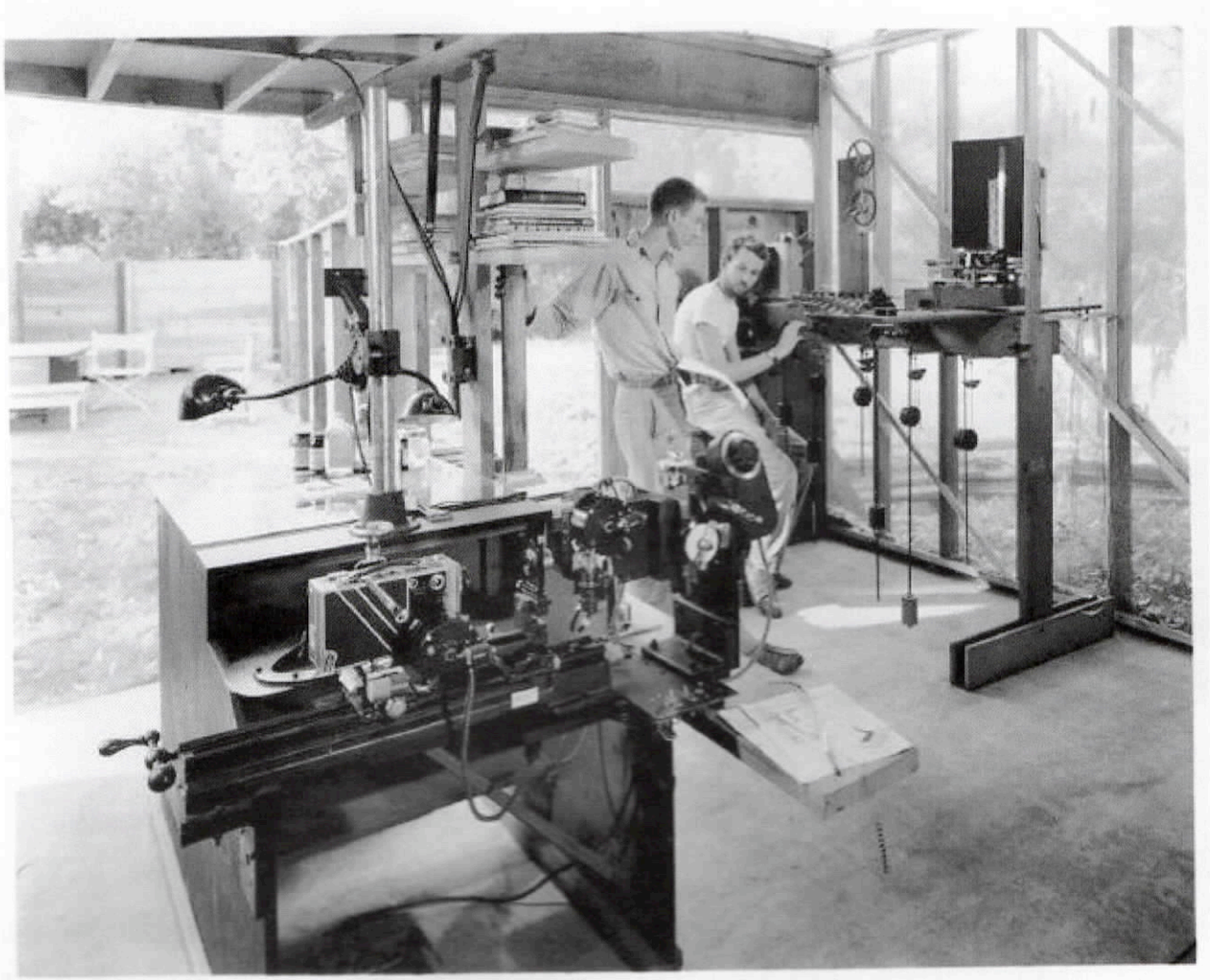
stills from Peter Foldes, *Hunger*



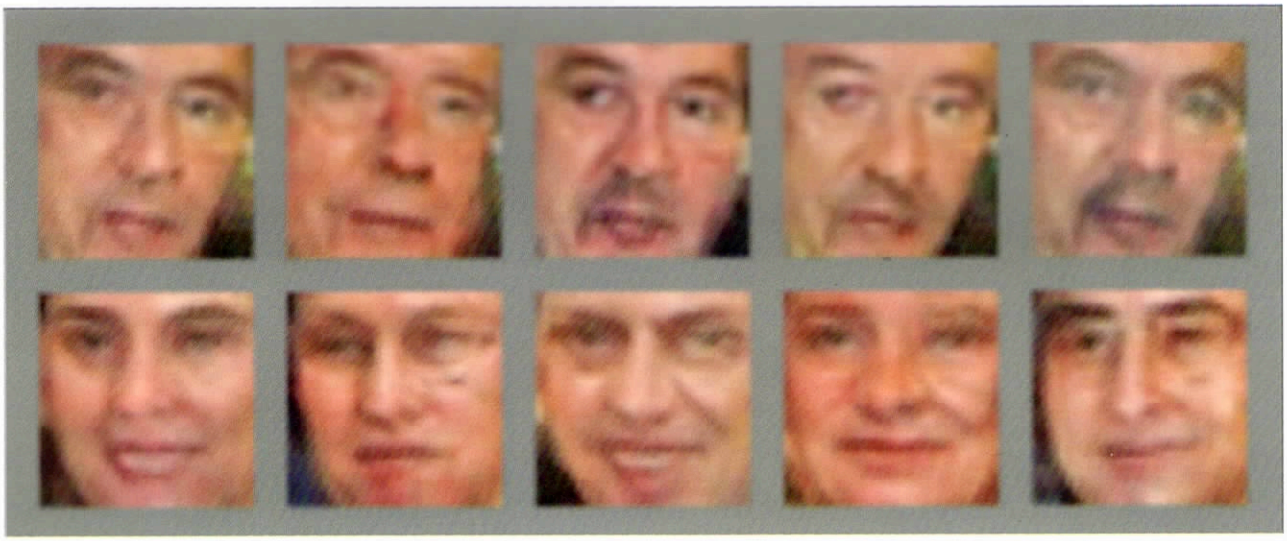
generated keyframes from Peter Foldes, *Hunger* (image contributed by Shelley Lake)

Could you describe what initially drew you to computer animation?

In my Junior year at the Rhode Island School of Design (1975), they screened one of the first computer animated movies, "Hunger" by Peter Foldes. The keyframe animation cels were conventionally hand drawn, but the in-betweens were obviously not hand made. I was enthralled with the machine intervention and knew precisely at that moment that computer graphics would become my obsession. It was the first time I witnessed a branch of mathematics that had a visceral effect on me. That sensation continues to capture my imagination.



John Whitney with his mechanical analogue computer, 1950s



from Jon Gauthier, "Conditional generative adversarial networks for face generation," 2015

What do you enjoy the most about the computer as an artistic tool?

The computer has a mind of its own, it is an intelligent partner in the creative process. The digital domain is full of surprises, machines are often more inventive than a human collaborator and certainly more accessible. Some people shy away from "The Uncanny Valley", that uncomfortable feeling that comes over you when you witness something artificial, not quite human. I love the Uncanny Valley, it's my home.

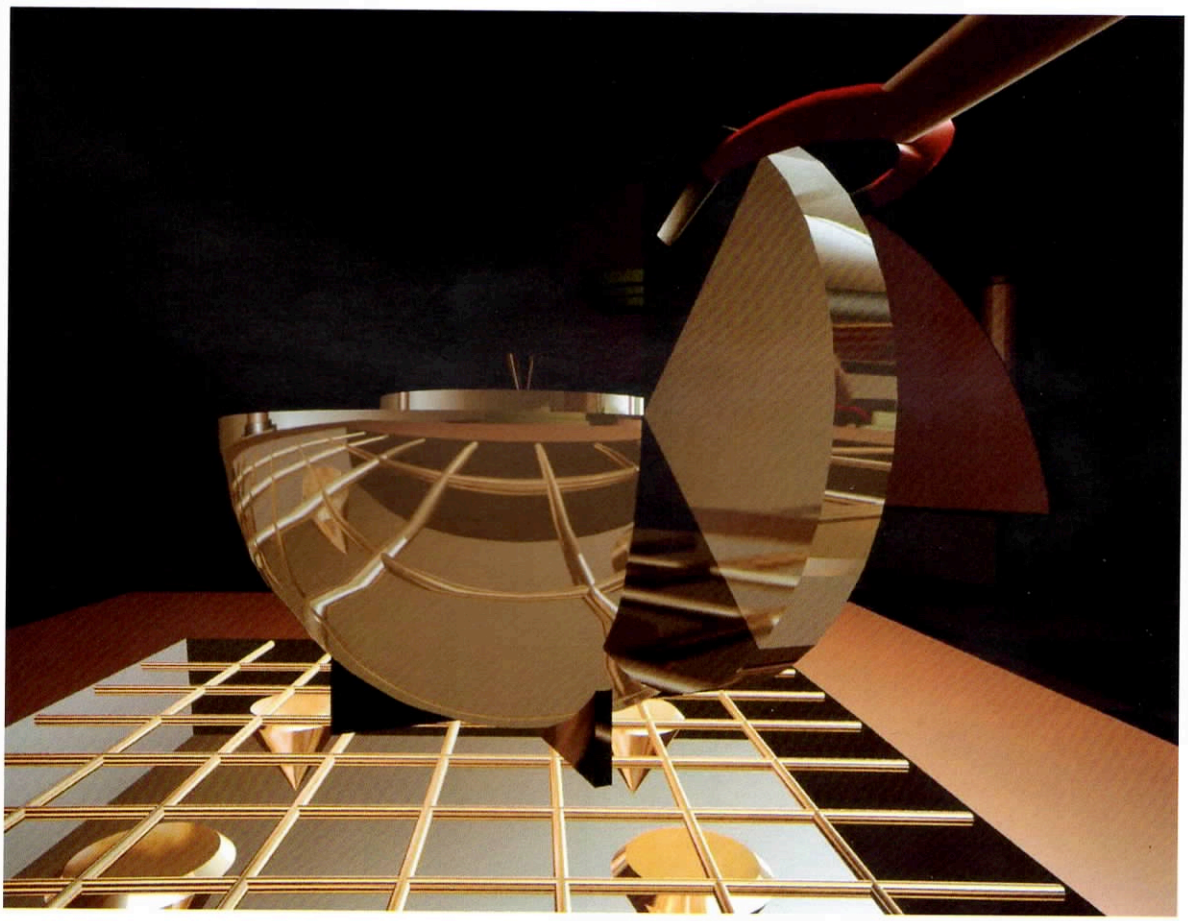
stills from Shelley Lake, "Who is it?"

If you made other animations leading up to this one; what were they like aesthetically and thematically?

One of my degree projects at the Massachusetts Institute of Technology was to build an interactive face reconstruction machine. In 1977, I digitized all of the cels in the Police Identikit and wrote compositing software to interactively assemble those elements in real time. After completing the Computer Identikit project, I created the animated short "Who is it?" using the Identikit to reconstruct and animate faces. Later, I collaborated with Pat Hearn on a suite of computer generated shorts called Artificial Intelligence. We made several music videos enabling a Votrax speech synthesizer to sing songs.

Vortax Type 'N Talk text-to-speech synthesizer

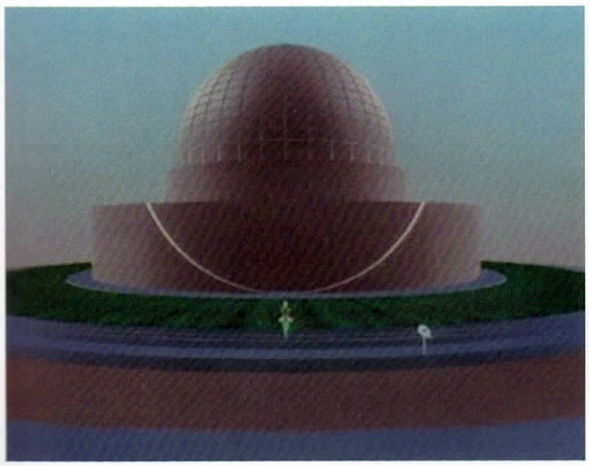
Marianne Brandt, *Tea Infuser and Strainer*, 1924



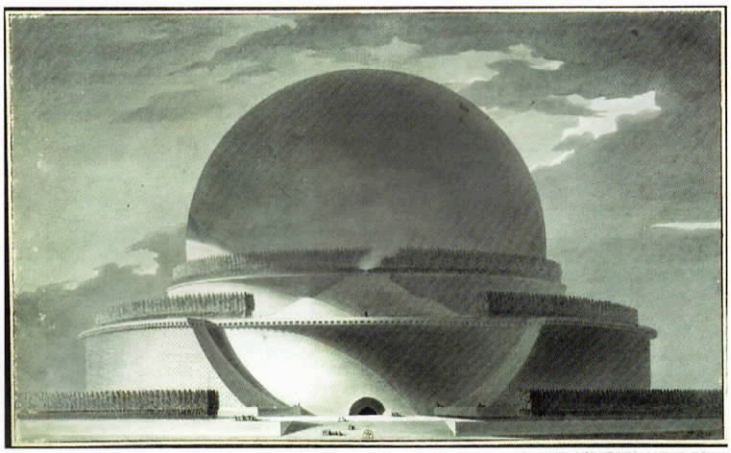
teapot from Shelley Lake, *Polly Gone*

Were there specific artists, styles, or movements that particularly inspired you in the making of Polly Gone? (I have to tell you that the robot reminds me so much of the costumes from the 1920s *Triadic Ballet*.)

The inspiration for the house of Polly Gone came from the Cenotaph for Sir Isaac Newton by the architect Boullée. Boullée's monument to Newton was never built, but many drawings of his design were circulated in 1784. Another inspiration from the Bauhaus was the teapot. Marianne Brandt designed her silver and ebony set in 1924. My version is a geometric reduction from her original design. Sacred geometry is a recurring design theme in my work, then and now.

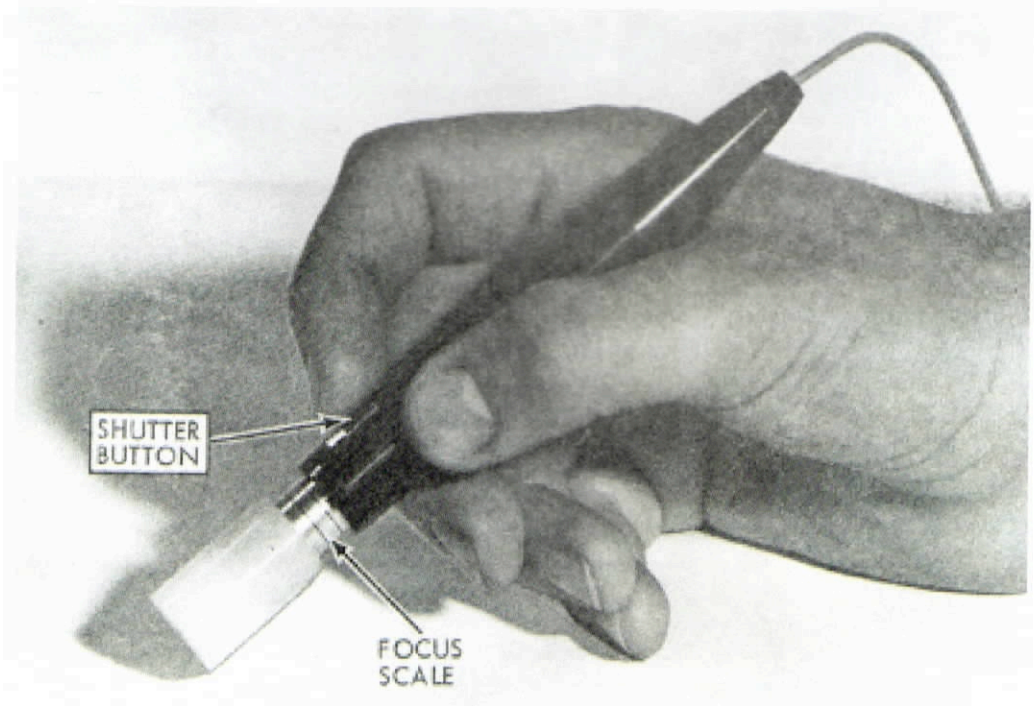


house from Shelley Lake, *Polly Gone*



Étienne-Louis Boullée, *Cenotaph for Newton*, 1793

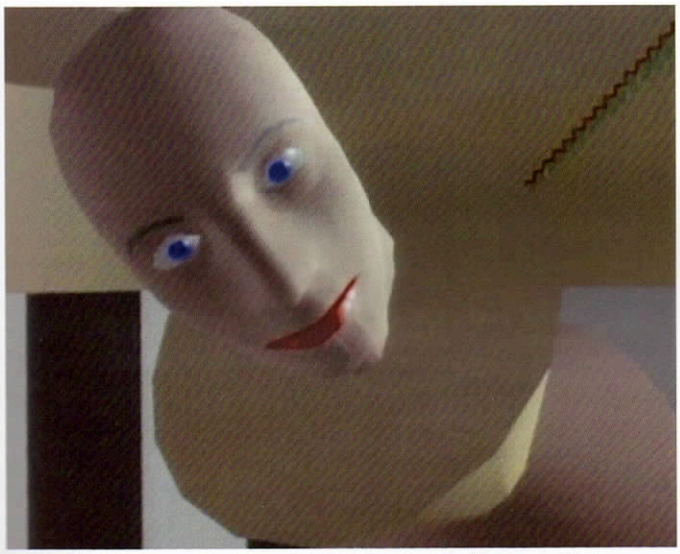
Ivan Sutherland (later to found Evans and Sutherland) demonstrating his Sketchpad technology at Massachusetts Institute of Technology, 1963



the Sketchpad's "light pen," 1963

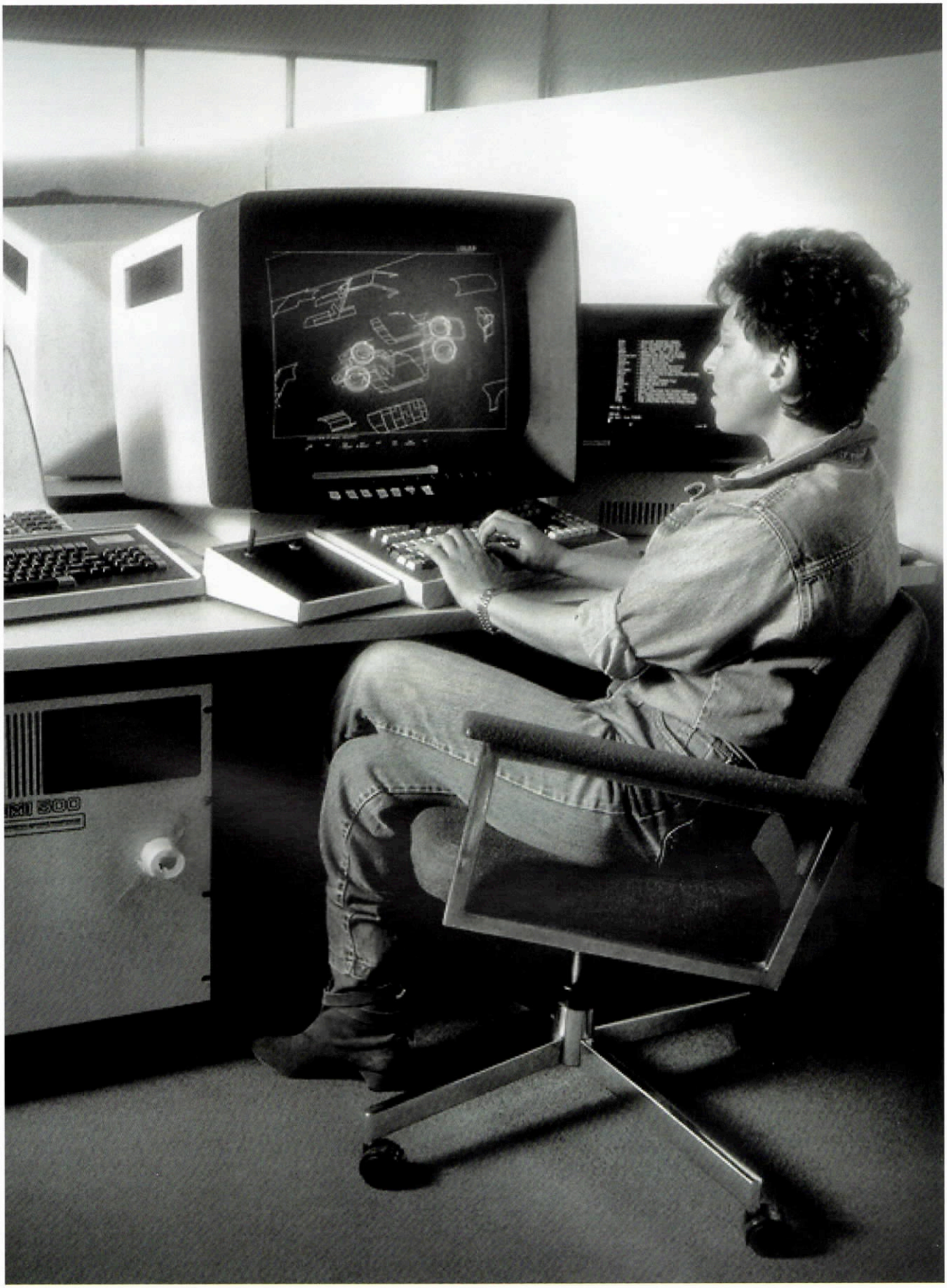
Did you start from physical sketches or go right to the computer?

I often researched and gathered images of inspiration from the public library, and used copies from those elements to create my own designs. I still use that same method today, however the internet speeds the process of gathering information. In 1982 at Digital Productions, we used a double cursor Evans and Sutherland digitizing tablet to input our models. I drew front and side views of each model and input those points using the two cursor tablet. The left cursor input the XY data points while the right cursor simultaneously entered the Z depth coordinates. Some models, like the head of Polly Gone, were entered on a three dimensional digitizing tablet that enabled us to place a sculpture on a pedestal and enter each point with an electronic pen. This was state of the art in 1982.



head of Polly Gone

Evans and Sutherland dual pen tablet (1980s) at the Computer History Museum

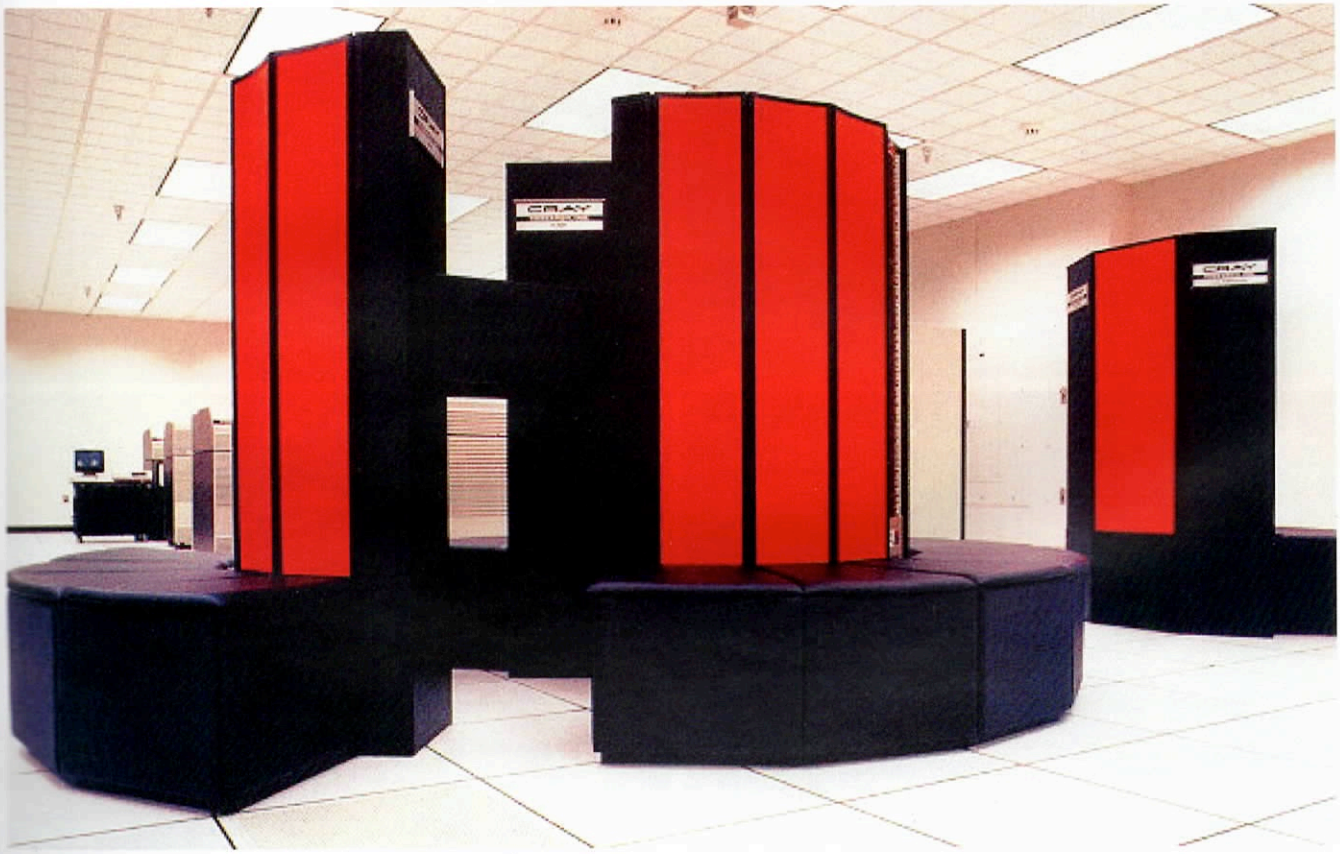


Shelley Lake choreographing a scene from *The Last Starfighter* on an IMI 500 workstation, 1983

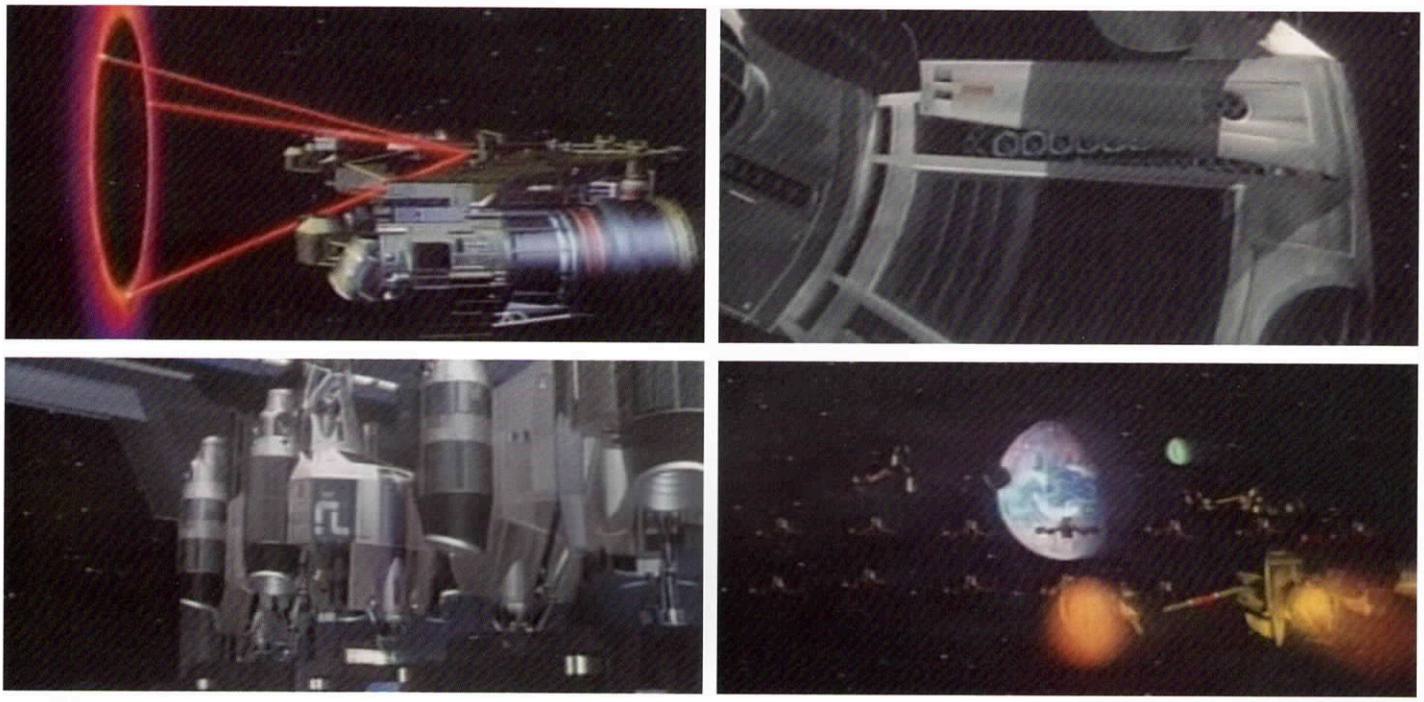
What software and equipment did you use to make Polly Gone?

In addition to our model making hardware and software, we also employed several IMI 500 vector graphic machines to choreograph our scenes. Our proprietary rendering software was called DP3D and was primarily the brainchild of Gary Demos. We relied on a Cray XMP supercomputer to render our scenes. The Cray was cooled by a 747 engine. We had to make almost one million dollars per month just to break even. A 30 second advertisement cost our clients almost half a million dollars to produce in the early 1980's.

John Whitney, Sr. designed the digital film printer where each frame was converted from digital to analog signals to be exposed to 35mm and 4" by 5" film. Some frames from our feature film "The Last Starfighter" took more than one hour to compute. Gary Demos and John Whitney, Jr. won a Technical Achievement Academy Award for their work on The Last Starfighter in 1984.



Cray XMP supercomputer

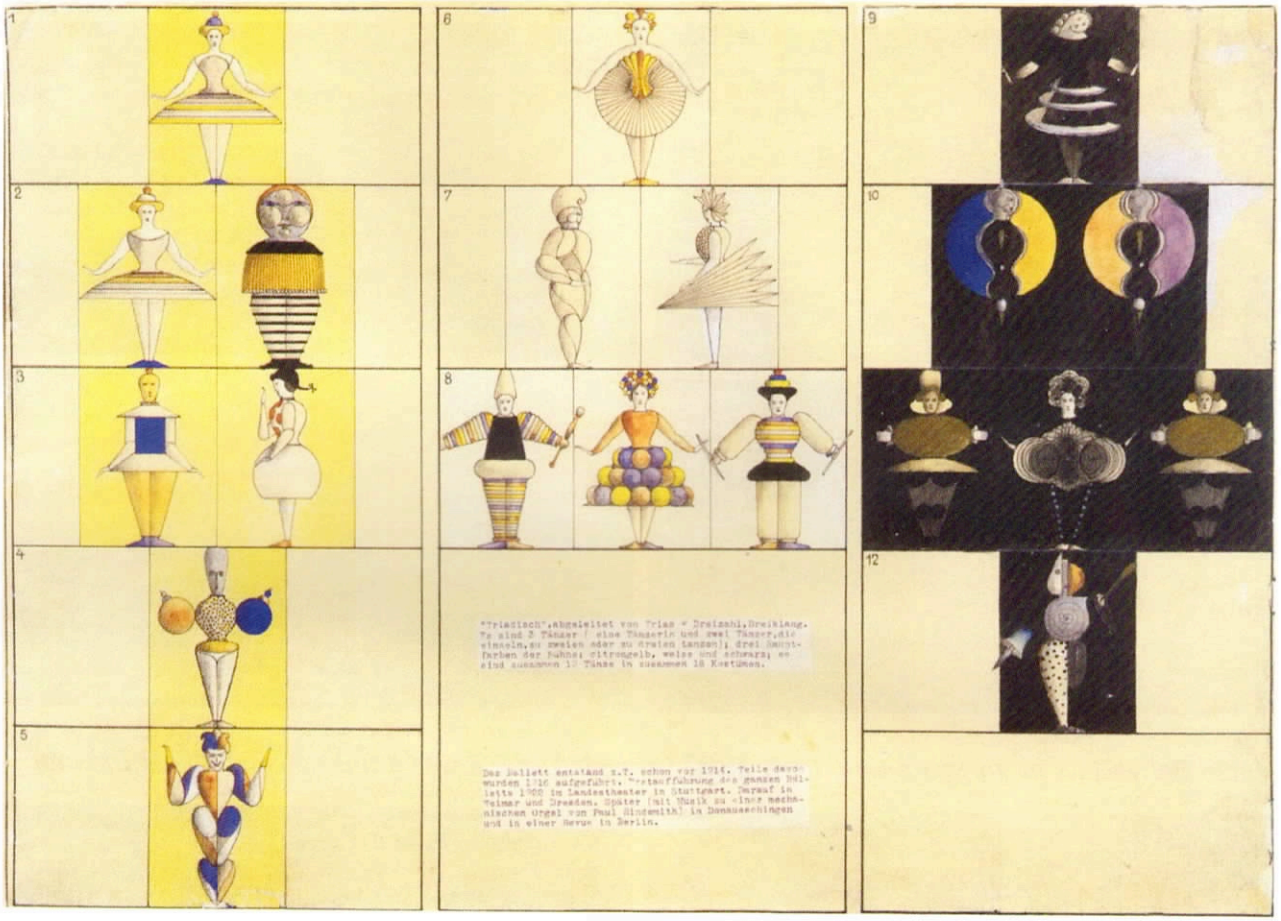


stills from *The Last Starfighter* (1984)

stills from Digital Productions' 1984 demo reel

Do you remember roughly how long it took you to make Polly Gone?

I created Polly Gone in my spare time from 1982 through 1987. I was a full time Technical Director at Digital Productions in Hollywood for those years and would submit scenes to be rendered overnight in our film queue. Scenes from "Polly Gone" would be rendered last, only if the film queue bottomed out. The film queue hardly ever bottomed out. It took us two years to produce 30 minutes of film for the "The Last Starfighter". We also juggled many advertisements, music videos and feature film effects during that interval.

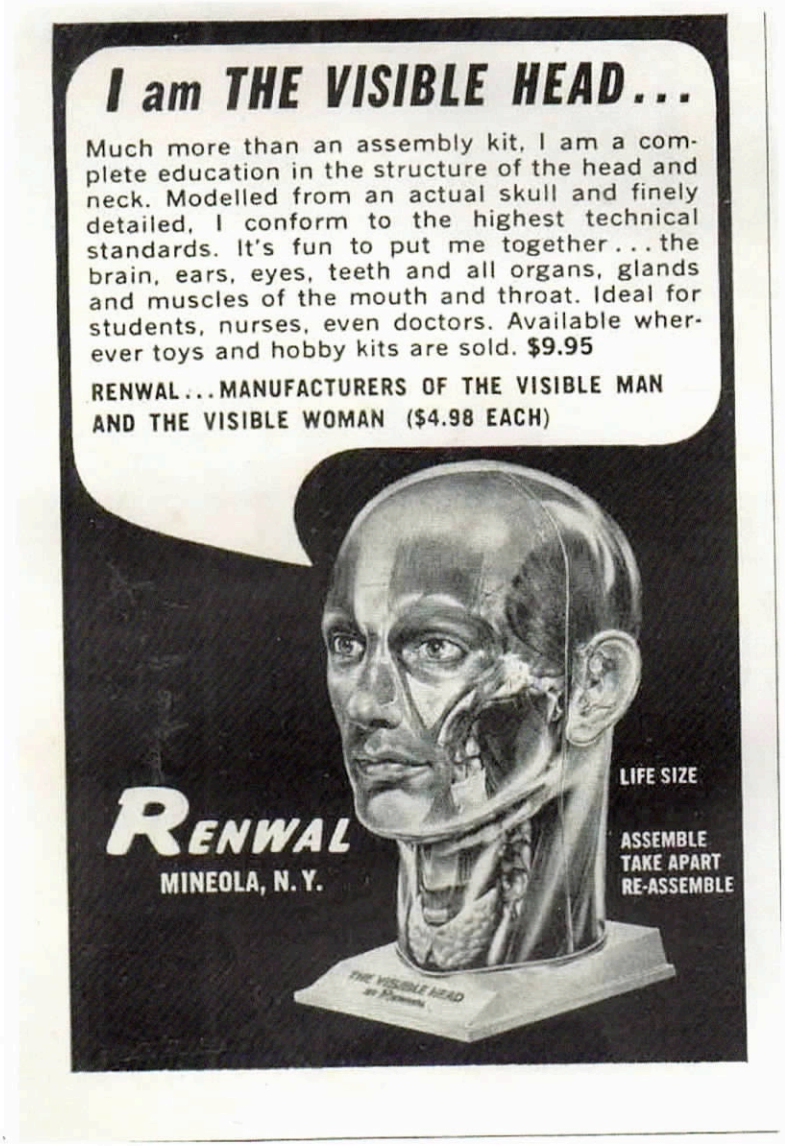


Oskar Schlemmer, sketches for *Triadic Ballet*, 1926

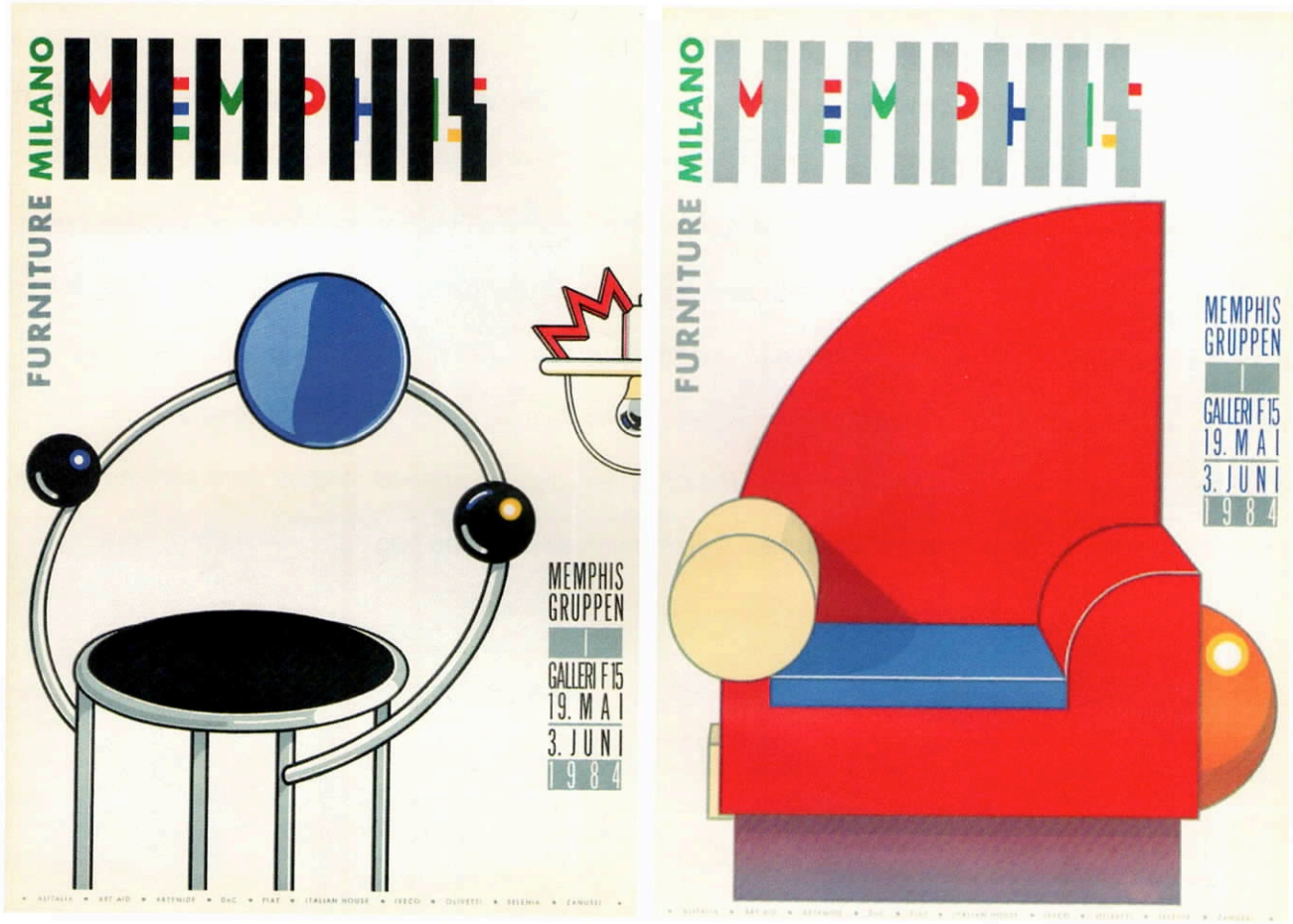
1970 film reconstruction of Oskar Schlemmer, *Triadic Ballet*, directed by Helmut Ammann

What was the process like of developing the robot character? What (if anything in particular) inspired it?

Oskar Schlemmer's Triadic Ballet was one of the driving forces behind the design of Polly Gone. I grew up with the Visible Man, the Visible Woman and later, the Visible Head by Revell. The Revell model was Polly Gone's head and was digitized with our three dimensional digitizing tablet. I drew a black wireframe mesh onto the surface of the plastic head, and digitized each polygon, one at a time. I used the same technique to digitize the iron. Only the complex, organic shaped models were entered on the three dimensional digitizing tablet, otherwise it was digitized with the two cursor system.



(image contributed by Shelley Lake)



posters for the Memphis Group, 1984

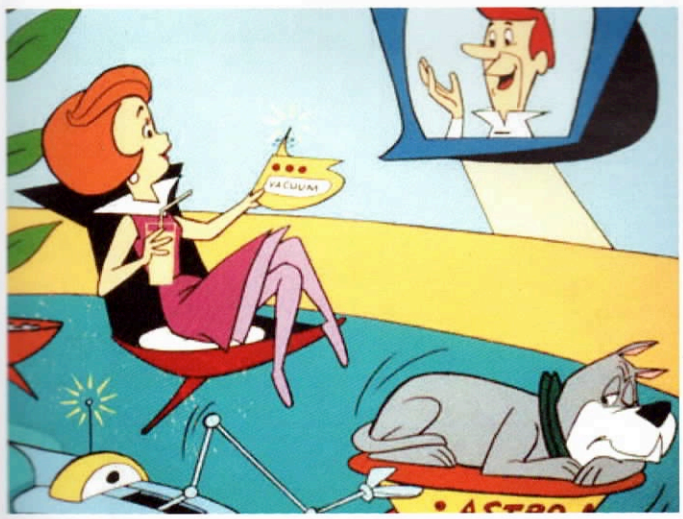
George Sowden, *Palace Chair*, 1983

Likewise, how did you go about developing the aesthetics of the environment?

The interior design, coloration and furniture was derived from the Memphis Group headed by Ettore Sottsass. I featured the Palace Chair by the Memphis designer George Sowden and even simulated the Cray XPM supercomputer in the center of the house. The Cray had colorful bench seating that mimicked the Memphis design and color scheme so popular in the early 1980's.

Could you talk a little bit about the narrative? For instance, I find it fascinating that you combine the futuristic / technological (a robot) with the everyday / banal (household chores) -- was that combination something that interested you?

I thought it would be funny to juxtapose a cold mechanical female robot performing a familiar mundane set of chores. It just seemed utterly ridiculous. That's one thing I always liked about The Flintstones and The Jetsons, it always came back to the familiar.



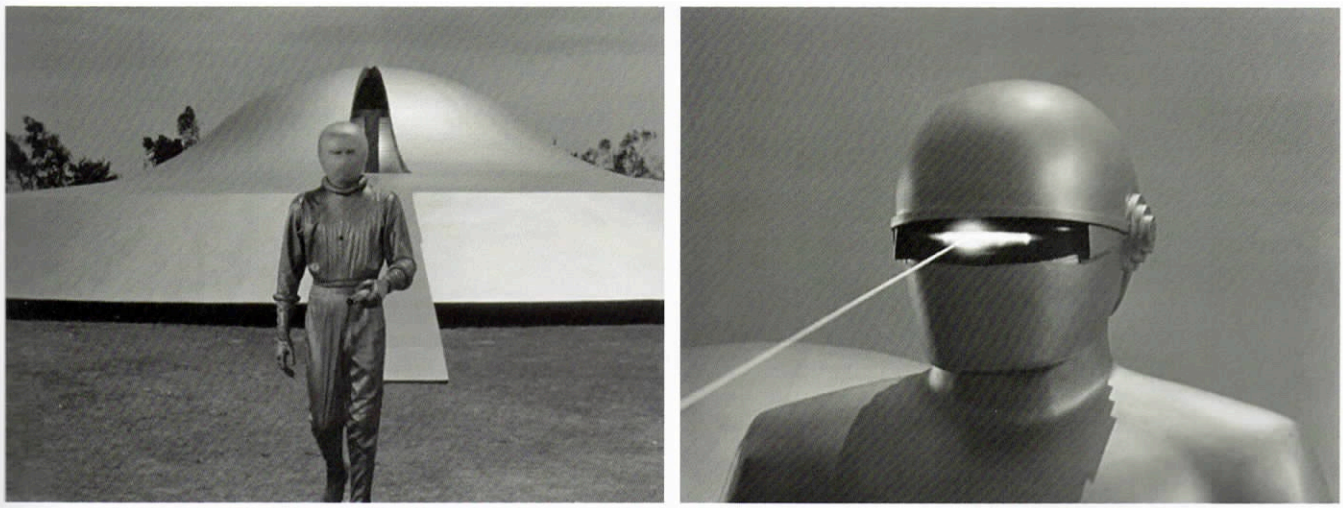
the Jetsons' "smart home"

ironing clothes in *Polly Gone*

Shelley Lake, *Ex Machina*

I saw in the credits that the music was by Dataland, but was unable to find any further information on them. Could you tell me a bit about the music?

Frank Webber and I were Dataland. We worked together on the music and appropriated the soundtrack from "The Day the Earth Stood Still" written by my favorite composer, Bernard Herrmann. Frank was a brilliant music engineer and did a fantastic job of orchestrating synthetic instruments. The underlying horror movie soundtrack feeds into the absurdity of it all. Near the end of the song, you can hear Patricia Neal utter the words, "Klaatu, Klaatu, Nikto, Nikto". Sunny Wood did the telecine transfer from 35mm film to video. Then we laid down the audio track and worked with editor Jane Allison-Fleck to cut the picture to the music.



Gort from *The Day the Earth Stood Still* (1951)

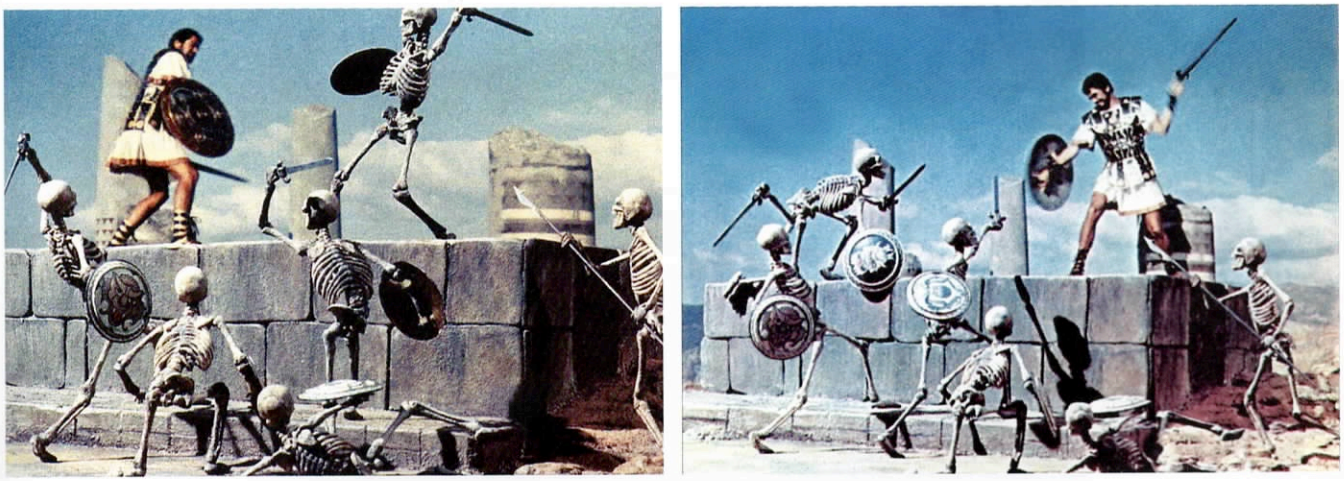
If you were to remake Polly Gone today, dwelling on the same themes, what do you think it might look like?

Polly Gone has been replaced by Ex Machina.

stills from Shelley Lake, *Stayin' Alive*

I see that you've gone on to do more work in 3D. Could you describe your current work and interests a bit? Do you still make animations?

My latest simulation "Stayin' Alive" is more photorealistic. The movement hinges upon live action motion capture. I've always been a Ray Harryhausen fan and have folded that sensibility into some of my still artwork. Most of my new work is about Pinups and Superheroes, fertility and strength.



scene by Ray Harryhausen in *Jason and the Argonauts* (1963)

Shelley Lake, *Son of Man*

This interview was produced on the occasion of the Internet Archive's first artist-in-residence exhibition, at Ever Gold [Projects] in August 2017. Special thanks to Shelley Lake and the Internet Archive.