

# Machine Edge

## An interview with Erika Lincoln

Cliff Eyland

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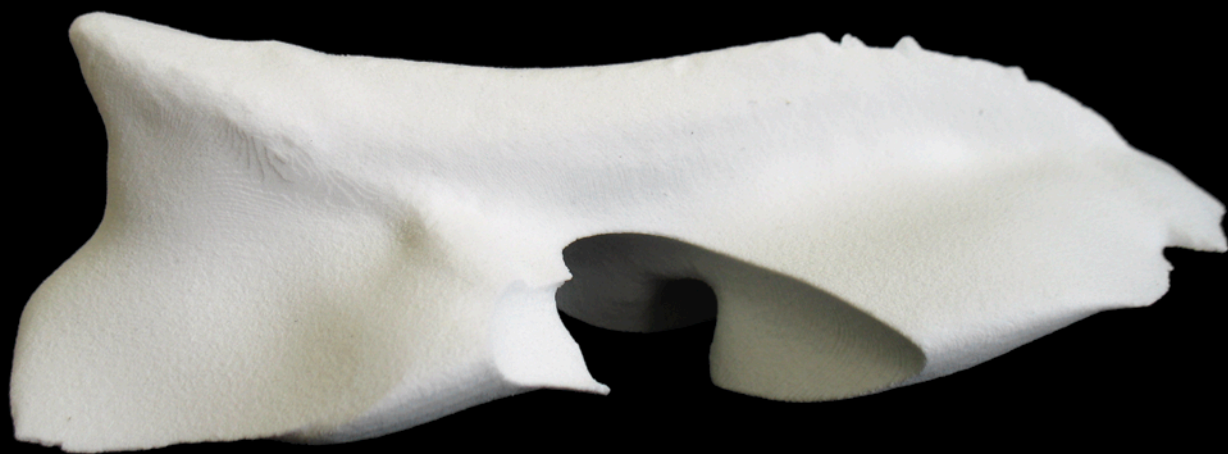
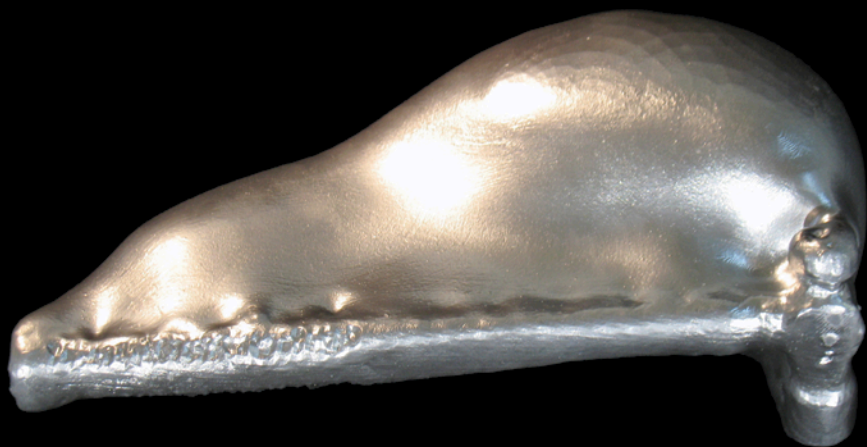
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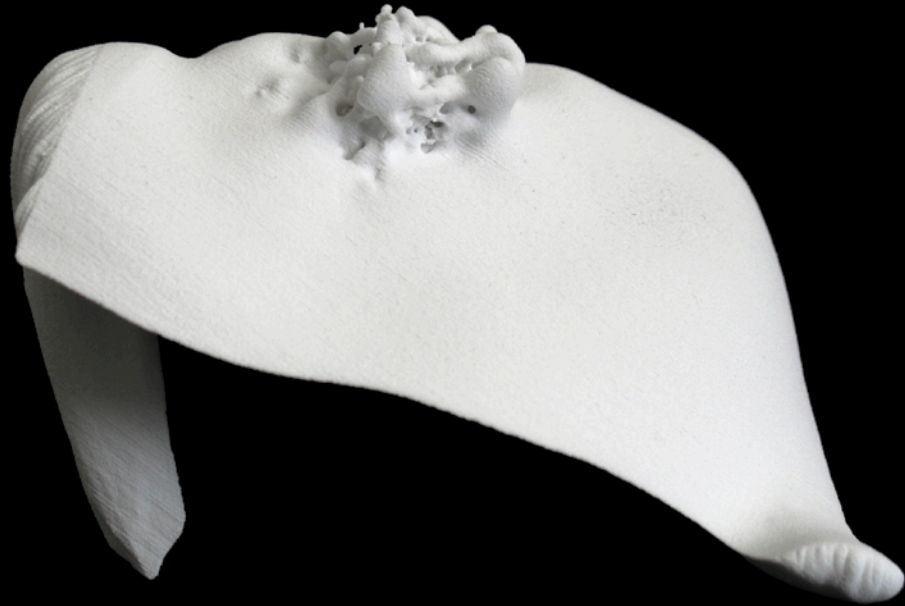
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Erika Lincoln, *HammerCloud*, 2014. 3D scanned and 3D printed sculpture, gypsum powder and binder, silver paint, 360 x 200 x 140mm. Photo: Erika Lincoln.  
Erika Lincoln, *WhaleCloud*, 2015. 3D scanned and 3D printed Blue whale model, gypsum powder and binder. Dimensions: Scalable. Photo: Erika Lincoln.



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### An interview with Erika Lincoln

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**C. E.** You are known to your peers as a high-tech artist, artists are never at the cutting edge of technology—it's the military industrial simplex (my term) that always gets there first. Thoughts?

**E. L.** You need to define for me what you mean by "high-tech" because it can mean different things: for example, communication technologies, scientific endeavours or theoretical ideas. And, I think art can be high tech. As for cutting edge technology and artists, I think you are mistaken, considering there are residencies such as Collide at CERN and with the European Space Agency, which places artists in facilities where cutting edge technologies are in use, and cutting edge ideas are being developed.

**C. E.** I wonder if you might tell me about your art processes and materials since the beginning, and I don't mind a long answer. Did you start as a sculptor and then move into machines from there? I'm trying to get a sense of your development as an artist, a sense that might not be easily discernible from a CV.

E. L. I started creating sculpture with found objects and assemblages and then progressed to making kinetic pieces using simple on/off switches with bells and motors, focusing on cause and effect. I also began using video to document myself performing with the objects I was making. I was interested in the idea that exhibiting the objects together with the video could create a space of a continual present (for lack of a better term), with the concept of a time loop having the objects existing both as video and as sculptural element.

When digital video editing became more accessible, I made a bit of a conceptual shift, in that once digitized, everything became numbers and values. This led to a move to interactive installations in which my objects became sensors or triggers, that is, ways to interface with digitized video files in the computer. Now, the performance with the object was left to the viewing audience. Then I moved from the closed loop of videotape to the openness of the computer program.

I'm still working with computers and I'm now using CNC machines and 3D printers to make my sculptural work. Because I'm still engaged by the concept of moving between the digital and the material world, some of the ideas that interest me now are concepts related to potentiality, accumulation, and reconfigurability.

**C. E. I was really taken with your show at the Winnipeg Art Gallery. The machines were beautiful and they worked!**

E. L. Thanks Cliff. Working in robotics and electronics can be challenging but that is the nature of the medium. I approach each piece from the perspective that it will at some point experience a failure of some kind, either electronic or mechanical. It's a matter of, well, matter. I particularly embrace this element and let it become part of the work by building in redundancies and spare parts that are easily swapped out, or by just letting a machine crash, albeit in an anticipated manner. It's a conceptual element for me. Don't forget paintings, drawings, traditional materials; these things break down as well, just at a slower rate.

**C. E. Winnipeg has only a few artists who work in your realm—I'm thinking of Ken Gregory and Reva Stone. Who are your community?**

E. L. Yes. I have been mentored by and worked with both Ken and Reva. And while the local community is small, I have a larger community of peers across Canada and around the world.

**C. E. You have a studio but you also produce things elsewhere because you do not, for example, own a 3D printer. What is a typical studio day for you?**

E. L. I've been able to maintain a studio since I left school. Since the opening of the North Forge, Winnipeg's makerspace, I do spend time there as well. Winnipeg is lucky because North Forge is very accessible, well funded and well equipped. When it comes to 3D printing, I did not go the route of buying/building my own machine mainly because the output quality is limited and at North Forge, I have access to industrial 3D printers. I also made a point of inserting myself in the makerspace community both as an artist and a woman as there is a tendency for makerspaces to be commercially oriented and male.

**C. E.** What strikes me about your latest work is how handmade it looks, more art nouveau than space station. Maybe we expect that artists who use 3D printers will make little machines and not organic-looking sculptures.

**E. L.** Careful planning of the geometry and strategic placement of dissolvable support material are key to the organic, non-mechanical look and feel of my 3D prints. The works from my CloudSeries do have that organic look to them in both shape and texture. I used a hole filling algorithm in a reverse engineering software to close the 3D scans, which resulted in some really pleasing shapes. I printed them using a machine that binds gypsum powder with superglue, which gives the sculptures a texture similar to sandstone or clay. I prefer this type of printing to plastic extrusion. And, as machine designs and materials become more advanced, so will my work.

**C. E.** Could you walk us through how you work with machines? What's the process, and the thinking behind the process?

**E. L.** My approach to 3D printers and scanners is the same as how I approach most machines, I learn how to operate them in the standard ways, and I get an understanding of all the elements such as the software, hardware and in 3D printing the output materials. It doesn't take long for me to start thinking about how to use the machine in an alternative way. It's interesting I don't set out to "hack" the machine rather I exploit its capabilities. For example, there's a machine I use that can be programmed to stop at different times in the build, once I learned that I realized I could create voids in my models in which things could be inserted during the printing process. Another thing with 3D printing that I really like is the process of extrusion as a concept. The durational element, something built over time, this is where I want to push my 3D printing. Instead of trying to build a static object from a 3D computer model, what would it look like to extrude an evolving process? Is it possible, I would like to figure out how to make a machine that responds in real-time to a changing process, what would the outcome be, what forms would emerge?

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**Cliff Eyland** is an artist, writer and curator. He lives in Winnipeg.

**Erika Lincoln** is a Canadian artist whose practice is centred around digitization. Through her work, she traces the process of digitization by way of iterations alternating between the material and the digital, pausing at different points along the way. Erika manifests this process by creating installations, sculptures, and videos, using elements of interaction, duration, automation and movement. Her work has been shown in media art festivals, museums, and galleries in Canada, Europe, the United States and Australia. Over the past 15 years, Erika has been awarded several grants from The Canada Council for the Arts and The Manitoba Arts Council. She has participated in residencies at the Banff New Media Institute in Canada and Medialab Prado in Spain and at the City of Winnipeg's Planning Department.