INTERVIEW WITH
Douglas Repetto

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by **Jeremy Hight**, online via email correspondence, June 2011

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Re-Drawing Boundaries, Leonardo Electronic Almanac New Media Exhibition
Curator: Jeremy Hight
Senior Curators: Lanfranco Aceti and Christiane Paul

Who and what are you some of your influences?

I don't think much in terms of specific artists' influences on my work. I do think a lot about the ways other people make their way through the world as artists or organizers, and I try to live up to their examples. People like Larry Polansky, Jody Diamond and their Frog Peak/American Gamelan Institute activities, Mark Allen and the Machine Project crew, and the current Music Information Retrieval scene where a bunch of young companies (like The Echo Nest and Music Hack Day) are reimagining the future of music distribution in an incredibly open, sharing way.

What are you working on now?

I have a young son, so I'm spending most of my non-work time hanging out with him. But I have a number of small projects and experiments in the works. I've been working a lot with pen plotters and the Chiplotle pen plotter library I'm writing with Victor Adan. I've been doing plotter drawings where I try to use the plotter in a live, intuitive way, but at the

same time I'm using generative processes to do the actual drawing. I'm working on a few collaborative pieces with LoVid as part of our long-term Cross Current Resonance Transducer project. Right now we're preparing an edition of weather data screen prints that will be in an edition put out by the SP Weather Station in Long Island City. I'm also trying to revive a music and computers book that I co-wrote with a bunch of friends a few years ago. We recently got the copyright back from the publisher so we're posting it online for free.

What brought you to start 'dorkbot'?

I had moved to NYC and didn't know anyone, but I knew that there were lots of weirdos doing fun things. And I wanted to meet them and see what they were working on. So I just started asking if anyone wanted to come and talk about what they were doing, and sure enough, they did!

Are you part of the Maker movement along with Mr. Jalopy?

I'm a big fan of the Maker scene, Mr. Jalopy, the clubs and videos and Maker Faires, and all of the terrific things that have come out of the communities around *Make Magazine* in the last few years. I'm a bit hesitant to call it a "movement", as that implies that these things weren't happening and then someone flipped a switch and then they were. I'd say that *Make* has done a wonderful job of being inclusive, of inviting in all different sorts of people doing different sorts of things and helping them find each other, and celebrating the fact that so many people are out there doing everyday, creative things.

What role does data play in your work?

In the Cross Current Resonance Transducer project LoVid and I have generally taken a skeptical view of data-based art, visualization, etc. We've purposefully made claims about the generation and use of data that don't really hold up. Nothing is legible, the data is lost in the design, the processing is optimized for looks rather than insight, or the data is allowed to lead the process, as if it possessed some sort of art-making wisdom. Data is just like anything else,

you can do compelling, important things with it, silly things with it, self-aggrandizing things with it. It's a bit of a fetish item right now, mostly, I think, because suddenly we've got so much of it and it seems like it wants to tell us something deep and important about the world. Unfortunately, even with bucketloads of data, there's still no free lunch.

How is an element of play beneficial in art making and process?

I'm generally incompetent, so play is the only way I ever get anything done. By lowering my expectations and approaching everything as an experiment that's likely to be a disaster I'm occasionally pleasantly surprised when something really good falls out...

What fields of art and technology does your work fall under?

I don't know. I try to follow whatever ideas I'm interested in without really thinking about genre or a particular field or tradition. I think of most of what I do these days as sculpture.

Does your background in music influence your art? How did you move from music to your more current works?

Thinking in terms of systems, of setting up situations and letting them play out, that came from studying contemporary composition, particularly mid-20th century experimental music, improvisation, musical games, graphic scores, etc. After a while I realized that I had lots of ideas that didn't work very well as music, so I started trying to let the idea determine how it should come out, rather than starting with the medium and trying to force the idea into it.

Are we seeing a cartographic moment?

Maybe an inverted cartographic moment: creating new spaces, new maps, then seeing if the world will put up with them...

What about working with technology and data visualizations allows for deep analysis and commentary in creative works?

I'm not sure that it does, at least not by default. I

think that often data visualization allows for sexy graphics and smooth presentations that use the source of the data as a kind of stand in for analysis, commentary, or concept.

In the last few decades whenever some new mathematical technique would come out, like chaos theory, or fractals, or a model of flocking behavior, suddenly there would be a bunch of music written using those techniques. Most of it was terrible, but if you got the timing right you could get a nice bit of attention for writing something "fractal", regardless of whether it was interesting as music. I think something similar is happening now with data visualization, data sonification, etc.

DNA music, geolocative art using controversial datasets, 2nd order datamining via Google, etc. There's an overwhelming amount of this stuff out there right now. It's quite hard to tell what's really interesting and what's mostly savvy PR and good timing. I really don't know how to judge for myself, which is why I try to stay skeptical. It's super exciting that all of this information is emerging and that so many people are starting to dig in. But it's really difficult, for me at least, to disentangle excitement at the simple fact of the data from excitement about some sort of actual transformative or revelatory use of the data.

And, of course, these are not new concerns...
(http://en.wikipedia.org/wiki/Lies,_damned_lies,_and_statistics)

Nearly Human, 2009, Douglas Repetto. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist

Nearly Human

Nearly Human (one billionth of a human brain) is a deeply flawed physical metaphor for a human brain. Like many brain (and other biological) metaphors, it is much too simple and mostly wrong. But it's also an attempt at being a little bit right in ways that are non-typical for popular representations of brains.

All metaphors are approximations; when a metaphor is used often enough we sometimes forget this, and start confusing the metaphor with the thing it is meant to represent. This is particularly true in complex subjects, like bio-medical research, where the full story tends to be messy and incompletely understood.

Popular accounts of research into human intelligence and the brain tend to over-use certain metaphors, in particular the idea of brain as a more complex version of an everyday technology. Depending on the era it might be brain as system of steam pipes, brain as telephone switching system, brain as digital computer, or most recently, brain as computer network. While none of these metaphors is completely wrong, and they do help illustrate a primary aspect of how brains function (lots of parts connected and communicating with one another), they also promote a much-too-simple idea of what is and isn't known about brains and intelligence.

Even research explicitly conceived as non-reductionist, when presented to the public, tends to use similar well worn, not particularly accurate metaphors and imagery.

Circular Spectrum Analyzer, 2008, Douglas Repetto. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist

Circular Spectrum Analyzer

Circular Spectrum Analyzer is part of the ongoing Cross Current Resonance Transducer collaboration with LoVid. It is a solar energy to sound and movement transducer. Two solar panels directly power a shortwave radio and two motors. One of the motors continuously tunes the radio across the 19MHz spectrum while the other slowly turns seven wooden discs. The shape and engraving of the discs were determined by data collected from the seven Sunsmile devices in *Bonding Energy*. The same data was used to engrave intricate patterns on the aluminum body of the sculpture. *Circular Spectrum Analyzer* is installed in the 'free103point9 Wave Farm' sculpture garden, and was created with generous support from NYSCA, the Greenwall Foundation, and free103point9.

Bonding Energy, 2007, Douglas Repetto. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist

Bonding Energy

Bonding Energy is an electrogeography and data visualization project inspired by ideas associated with micro-credit loans and distributed computing applications such as SETI@home. It presents a model system for distributed microenergy generation in which geographically dispersed devices collaborate to analyze a large scale phenomenon (light levels) using solar panels. In a microenergy system these panels would also harvest energy from the light they measure. *Bonding Energy*'s live graphical representation of luminance readings suggests the utopian possibility that many such small local energy collecting devices could produce a greater effect than the sum of their parts, helping contribute to energy independence.

Bonding Energy consists of a set of "Sunsmile" devices that measure solar energy from seven sites around New York State. We have invited a group of geographically distributed media arts institutions in New York State to participate in *Bonding Energy* by hosting one of the Sunsmile devices that measure and send solar data to a central server.

In keeping with our general CCRT working method, the physical form of the devices was determined by our interpretation of a previous generation of solar data manually collected in our studios each day during January 2007. The 31 data points were used to cut acrylic rings for the bodies and to create molds for the cast plastic bases. Each "Sunsmile" also holds a printed circuit board and has a small solar panel sitting on top.

Every ten minutes each Sunsmile device takes a reading from its solar panel and sends the data to the turbulence.org server. When a viewer visits *Bonding Energy* they are presented with a live visualization of the data collected from the seven devices. Data from each device is represented by a wedge in an animated circle. The colors in the wedges change as the data from the previous seven days is played back; oranges represent low light levels, yellows medium, and blues indicate high ones. Highlighted bands indicate maximum and minimum data values, and a rotating line of text displays the date and time of the data being displayed in the center of the circle at each moment. Shapes overlaid on the animation represent changing data relationships between and within the Sunsmile devices.

Artist's Statement

Making art can seem useless, but it ends up being useful in unexpected ways. I'm not very interested in distinctions between things like genres, disciplines, academic departments, high and low culture, etc. So I end up working with lots of different kinds of people with wildly varying interests. *That* is exciting.

Bio

Douglas Repetto is an artist and teacher. His work, including sculpture, installation, performance, recordings, and software is presented internationally. He is the founder of a number of art/community-oriented groups including dorkbot: people doing strange things with electricity, ArtBots: The Robot Talent Show, organism: making art with living systems, and the music-dsp mailing list and website. Douglas is Director of Research at the Columbia University Computer Music Center and lives in New York City. ∎