



DECONSTRUCTING HUNTER: WILL THE REAL BIONIC WOMAN PLEASE STAND UP?

by Kevin Cole

I awoke and glanced down at the time: 4 a.m. The television, still blaring, was tuned to PBS where I had left it before dozing off. Reaching for the remote and about to push the power off, I noticed the narrator speaking of Rosalind Franklin (“NOVA, The Dark Lady of DNA,” PBS).

Rosalind Franklin...A couple months earlier and I would have turned off the tube and gone to bed. Tonight, I sit glued to the set grabbing the nearest piece of paper and a pencil. Two-plus pages of notes and an hour later, I turn off the set.

Between February and April 2003, celebrating the 50th anniversary of the discovery of DNA, numerous articles, TV commentary, and radio segments flooded the media. *Time* devoted its February 17th cover story to the historic discovery. Picking up the latest copy of *Seed* magazine, I flip to the article on artists exploring DNA. An AP article headlines, “Human

genome map ‘essentially complete’: Genetic code now available to scientists”... (and artists, I think).

Franklin was the lesser-known scientist, a woman working in the 1940s and 50s, whose research enabled Watson and Crick (James Watson and Sir Francis Crick, Nobel Prize recipients) to solve the structural problem of DNA. It was Franklin’s superior expertise in crystallography that helped advance work by Maurice Wilkins at King’s College, London, regarding DNA structure. Rosalind discovered that there were two distinct forms of DNA—Type A and Type B. In 1951, Franklin delivered a symposium on her findings, and one year later in May produced the famous “Photo 51” that captured the B type used by Watson and Crick to build their model. Sarcastically called “Rosie” by Watson and Crick, Franklin was single-minded, had a full social life, and died prematurely at age 37 of cancer most likely caused by her extensive work with X-rays in the lab.



Top: *The System Forgets Scientists Are Only Human*, installation view

Bottom: G. Hunter O’Reilly, Ph.D

Artists and Scientists

Leonardo da Vinci may have been among the first, but the list is growing. Eduardo Kac (known for his living, glowing GFP (Green Fluorescent Protein) bunnies, and 'GENE'SIS art images), David Kremers (use of MRIs at Cal Tech), Damien Hirst (U.K. bad boy), Joe Davis (unofficial artist-in-residence at MIT), Roger B. Dannenberg (composer and computer scientist, animation collaborations inspired by nerve functions), Gunther von Hagens (preserves human species through plastination), and Hunter O'Reilly.

Critics have noted the rapid advancement of these emerging *sub-species* of art. Sometimes called "Bio Art," the category, like many catchall terms in art, leaves much to be desired. O'Reilly is a true emerging artist whose work spans several mediums. Beginning with large oil paintings on canvas, she has moved more toward digital photographic collage images that more successfully integrate her conceptual approach to her art (Portrait of Shauna Anderson). O'Reilly also creates mixed media works including neon sculpture (*Red Marrow* done in collaboration with Electric Eye Neon studios of Milwaukee), and assemblages (the "Radioactive Biohazard" exhibition's *The System Forgets Scientists Are Only Human*). O'Reilly's works often provoke controversy and reactions from viewers due to their pertinent and political subject matter.

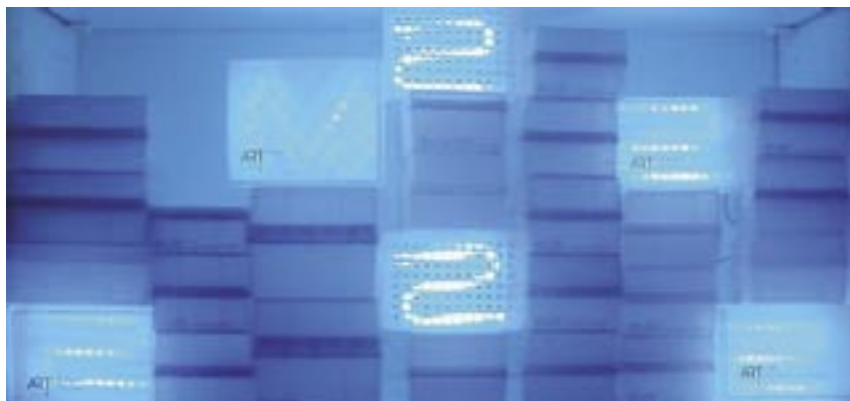
G. Hunter O'Reilly, Ph.D. (the "G" stands for Gayle, but she prefers her original surname, Hunter, these days) grew up in San Francisco. She recalls as a child visiting Golden Gate Park on weekends, splitting time between the Academy of Science Museum and the de Young Museum where its African art collection—masks and sculpture—made an early impression.

"My father always loved science, so my interest began very young. My mother played both the flute and piano," she recalls. Her parents divorced when she was young. A trip to Paris in 1996 was a turning point for O'Reilly who acknowledged that it was during visits to several French museums that she realized she wanted to become more serious about making art.

At ease addressing a class on genetic engineering, molecular biology, or attending an opening of original artworks that reflect her interest in integrating art and science, it's all in a day's work.

While at Berkeley she met Robert O'Reilly, and the couple later relocated to Wisconsin and married. Now an attorney with Ademi & O'Reilly, husband Rob founded his own Milwaukee-based law firm that handles consumer class action lawsuits and personal bankruptcies.

Preferring to drop the "Dr." when traveling in the art world, never-the-less armed with a Ph.D. in Genetics and degrees from UC-Berkeley (B.S., Plant Biology) and the University of Wisconsin, Madison



Clockwise from top right: *Rosalind Franklin and the Discovery of DNA Structure*, digital photo collage; *Red Marrow*, animal bones, neon, and plexiglass; *The System Forgets Scientists Are Only Human*, installation detail; *A Few Cells Create a Kidney and a New Life* (Portrait of Shauna Anderson), digital photo collage; all by Hunter O'Reilly

Hunter O'Reilly has ambitions for her art. She is serious and committed about her creativity.

(M.S., also in Genetics), O'Reilly's *Curriculum Vitae* reads much like many others in academe. But there are noticeable differences, and art is just one of these. While in Madison, O'Reilly studied with Master Printer Andrew Balkin of AGB Graphics.

At ease addressing a class on genetic engineering, the "transmutation" of bacteria, molecular biology, or genetic cloning; or attending an opening of original artworks that reflect her interest in conceptual relationships integrating art and science, it's all in a day's work for the young, accomplished, and energetic University of Wisconsin lecturer.

The hat...it's different...it's the thing that stands out when you first meet her. (She claims to have more than 50 of them). "I just like hats," she says. It serves nicely as a metaphor. Hunter O'Reilly does wear multiple hats, literally and figuratively. She is the creator of "Biology through Art" a new class that is growing in popularity in the University of Wisconsin system at both UW-Milwaukee and UW-Parkside. The class is listed under both the Art and Science colleges.

Students are required to do a *biological* self-portrait. The project spans the entire course culminating in solo presentations during the last week. The course involves instruction in biology and the scientific method, using DNA as an artistic medium, seeing anatomy as art, viewing microorganisms, and creating music based on DNA and protein sequence. Students learn new perspectives on biology and art and use new media to express themselves.

**Kenosha, Wisconsin
Tuesday, January 7th**

The hat—one of her favorites—I think I've seen this one before. Hunter O'Reilly, er, uh, rather, Dr. Hunter O'Reilly delivers her lecture to an attentive group of 20 students.



Hunter O'Reilly at opening reception—Porter Butts Gallery at the Union

Standing over her computer, notes projecting on the wall, she clicks her mouse and moves on to the next image. A microscopic magnification fills the wall behind her as part of the GFP-infused cellular image wraps itself around her never reaching its final, intended destination, reflecting instead off the familiar white lab coat she wears.

O'Reilly moves back and forth with apparent ease, from being a scientist to being an artist. Her role today is the former. You'd expect to see two hooks side-by-side on the wall, one hung with a white lab coat and adjacent to that another draped with a paint-spattered artist's smock.

Talk with her students, and you get mixed responses. Some are here just to satisfy one of three science classes required to get their degree. Heck, I'd even sign up to take this class if I was still in school. I never imagined I'd be sitting through a spirited discussion on molecular biology, observing bacteria transformation using *E. coli* bacteria, and enjoying it!

The old myths, "It's an easy elective," or, "It's an art class," follow her around now, too. "I just needed a science class... How hard could it be?" remarks one student whose major is sports administration. I smile.

Another student, Eva Lee, herself a professional artist, traveled from Connecticut to attend the "Biology through Art" class during the two-week Winter Practicum.

**Madison, Wisconsin
Friday, January 24th**

There it is again—this time O'Reilly's hat is encircled with a tube of blue neon casting a glow not only across the artist's face but also on those nearby, on this 20-degree Celsius Wisconsin winter evening.

The crowd at the Porter Butts Gallery at the Union is made up of a combination of students, scientists, artists, and friends. This is homecoming of sorts for the UW alum who sports two degrees from Madison. "Radioactive Biohazard" has returned from Ann Arbor (University of Michigan's School of Art and Design) where it spent the fall (2002) on exhibit at the Warren Robbins Gallery. Promoted by the Life Sciences, Values, and Society Program (LSVSP) at the University, the show received positive reviews from campus publications, the *Ann Arbor News*, and the *Detroit Free Press*.

A rack of long white lab coats greets visitors at the gallery entrance. Inside several students have taken the opportunity to don costumes and play the part. A scientist is overheard to say, "We wear those things all week...I'm not about to put one on now!"

Two weeks into its run, UW campus police responded to a call by an anonymous complainant questioning the toxic materials on display in one of O'Reilly's installations, "Art that is dangerous if swallowed." To avoid further complications, the gallery director Ralph Russo removed four bottles of substances from the piece. When asked, the artist shrugged, "When students work in chemistry labs,

there are risks. What's to prevent someone from going into a grocery store and ingesting a bottle of bleach? When a substance is used as part of a work in an art gallery, all of a sudden it's different—it becomes dangerous?" Consequently, signs warning gallery goers were installed, and the exhibit continued. Gallery Director Russo reported that daily attendance during the show was nearly double the usual 200 visitors per day.

Art vs. Science

In July of 2001, ABC News aired its "Nightline" program featuring a story on MIT's Joe Davis. Entitled "Gone Fishing," the show received overwhelming attention. When asked by reporter Bob Krulwich about the relation of art and science, Davis recounted the following:

"It's like the story of the scientist and the artist sitting on a hill. And, the artist sees a cloud go by and says, 'My, my, that looks like a tree.' The scientist says, 'Well, in the first place, it's 30,000 feet in the air, and, in the second place, it's made out of water vapor... See, it can't possibly be a tree.'"

Davis explained, "The normal approach of science toward creativity is all the reasons something can't be true. And, the normal artistic approach is all of the reasons something just might be true."

A fixture at MIT for more than 20 years, Davis created sculptures and repaired Harleys in Louisiana before moving to Boston. Now, Davis creates puzzles. He asks the question: "Is all we're doing all that there is to do?" "It's the coolest dark tower in town," Davis adds. "It's all hypothetical!" Armed with the resources of some of the world's finest minds, he helps brilliant scientists think outside the box.

A recent Davis project is to build a biomechanical ornithopter powered by electrically stimulated frogs legs and to fly it across the Charles River. Another project, Microvenus, embedded artwork into a bacterial genome using an encoded image.

A paper on genetic art, co-authored by Davis, Dana Boyd, Marek Wieczorek, and Hunter O'Reilly for the Nature's *Encyclopedia of the Human Genome* (EHG) is scheduled for publication later this year. Davis was guest lecturer last year at the UW-Parkside campus in Kenosha, while O'Reilly reciprocated by delivering a program at MIT.

National and International

In April 2003, at the invitation of O'Reilly, Helen Donis-Keller, Professor of Biology & Art from newly founded Olin College in Needham, Massachusetts, spoke on the topic of, "Art, Science, and the Creative Process," at the UW-Milwaukee campus.

Working 20 years as a molecular biologist before returning for her MFA, Donis-Keller's own artwork featured studies



using human molecular genetics to draw correlations between genotype and phenotype ("geno-" being genetic and "pheno-" being genes with environmental factors). A series of 176 self-portraits comprised of digital images done by the artist/biologist, that she lovingly referred to as *Helen Heads*, exhibited at the Santa Barbara Museum of Art in California

Of her art, Donis-Keller states, "My work as an artist draws upon my experience as a scientist. The images are not literal depictions of biology. They express the abstract ideas that continue to puzzle and fascinate me. I feel like my life has come full circle."

O'Reilly has been invited to speak about her program "Biology through Art" to an international arts/science group, Dialogue of Science with Art, meeting in the Czech Republic in the Summer of 2003. Her website, www.hunteroreilly.com, has generated substantial international interest in her work and has resulted in articles published in Spain (*Muy Interesante*) and France (*Max, Beaux Arts*, and *Le Monde*).

Examining the 32-year-old artist's work at this stage of her career reflects the inconsistencies consistent with youth and experience. Certainly, the photographic digital collage images succeed on multiple levels and are among her strongest works. Hunter O'Reilly has ambitions for her art. She is serious and committed about her creativity. She is bright and possesses an assertiveness that sometimes makes others in the art world uneasy. Go figure.

It will become less and less uncomfortable in the future to discuss art and science (or science and art) in the same breath. Ironically, that future is already upon us. As SARS, chemical weapons and bio warfare, cloning, newly discovered viruses, genetic engineering, and other technological breakthroughs infiltrate society, our choice is to become the ostrich, or be open to modern science—to think differently, creatively, about the role science plays in our lives, our future, and how it is transforming art. ☉