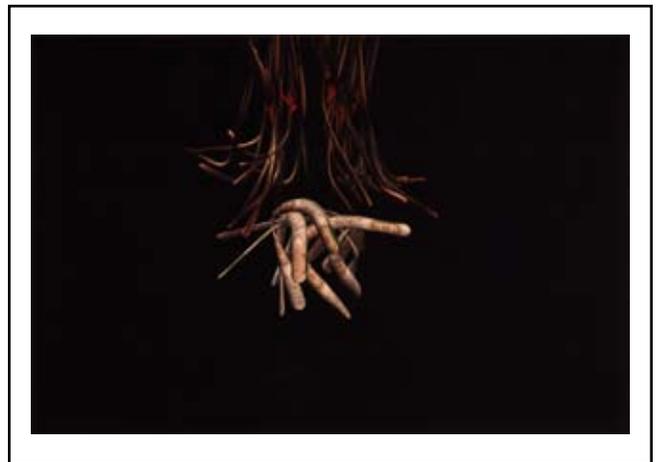


Reva Stone  
IMAGINAL EXPRESSION

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Reva Stone's Embodied Technologies  
BY JOY JAMES

Artist's Statement (2006)  
REVA STONE



Reva Stone's Embodied Technologies  
By Joy James, 2007

We have no idea, now, of who or what the inhabitants of our future might be. In that sense, we have no future. Not in the sense that our grandparents had a future, or thought they did. Fully imagined cultural futures were the luxury of another day, one in which "now" was of some greater duration. For us...futures like our grandparents' have insufficient "now" to stand on.<sup>1</sup>

William Gibson, *Pattern Recognition*, 2003

Reva Stone  
*Imaginal Expression #4*, 2003

digital ink jet print on paper, edition of 3  
(image size: 70.8 x 106.2 cm)  
SAG 2007.02.02  
Gift of Dr. Harold Stone

Photograph by Scott Massey

Reva Stone is a Winnipeg-based artist working at the forefront of new media art.<sup>2</sup> She received a Bachelor of Fine Arts from the University of Manitoba in 1985 and has maintained an active arts practice since then. Her exhibitions have garnered her local, national, and international acclaim. For the past ten years she has been making and exhibiting work that explores the relationship between science, art, technology, and the changing definitions of what it means to be human in the late twentieth and early twenty-first centuries. Stone's work poses questions concerning the medical uses of biotechnological imaging systems, as well as developments in areas such as genetic engineering,

virtual reality, and artificial intelligence. She shows us that emerging technologies have outpaced society's ability to understand and regulate the impact of technological innovation on human subjectivity, identity, and social relations. Importantly, she brings our attention to the fact that technology is moving more quickly than our comprehension of the ways in which it is affecting us individually and collectively.

What both Stone and science fiction writer William Gibson are gesturing towards in their work is the inability to know from this place, the place that we are in now, what we are becoming. The extent of this



Reva Stone, *Imaginal Expression #4*, 2003, digital ink jet print on paper, edition of 3 (image size: 70.8 x 106.2 cm) SAG 2007.02.02 Gift of Dr. Harold Stone Photograph by Scott Massey

inability to know where we are going, who we are becoming, highlights the urgency of the questions raised by Stone. This ambivalent space created by questions without answers is the place of departure for her work, both in its making and as a viewing experience. As my above reference to the writer who coined the term “cyberspace” suggests, Stone’s concerns locate her within a larger discussion that has emerged over the past few decades around the impact and implications of new technologies.<sup>3</sup> A widely diverse group of contemporary artists, scholars, critics, writers, scientists, filmmakers, and news media producers, among others, both within Canada and internationally have been struggling to understand how technological innovation is changing the very nature of what it means to be human.

The series of five of Reva Stone’s photographic prints held in the Surrey Art Gallery collection are stills captured from Stone’s installation artwork *Imaginal Expression*, an exhibition that traveled throughout Canada and was shown at the SAG in early 2006. The large scale of this installation projection entailed four video projectors that together produced continuous images in real time over a 48 x 9 foot span of gallery wall. The image emerged from the interactions between viewers and the work’s computer program. Stone describes the process on her website:

When the visitor enters the gallery space, a large, constantly moving “soup” of molecular components is seen projected on the wall. Real time animation based on inverse kinematic physics causes this motion to constantly change with no repetition. As the visitor is sensed in the gallery space some of the components begin to coalesce into a complete molecule that follows the movement of the visitor. This response is initiated by a computer visioning system that was developed as part of the software. In

addition to responding to the movement of a viewer, a molecule also has the capability to exchange its fleshy covering with another molecule when the motion of more than one viewer brings them into proximity with each other. When a visitor leaves the space, that molecule will degenerate over time. As a result, the visitor participates in a continuous cycle of generation, mutation and dissolution.<sup>4</sup>

The viewer was thus immersed in a responsive sensory environment that mixed the familiar with the strange. Familiar, because it was the viewer’s own bodily presence and movements that animated the images streaming across the enormous wall screen. The sense of connection created by this correspondence of body to the generation of images was evident and tangible for viewing participants. Familiar, too, because popular television and film, as well as all forms of news media, have given viewers a visual vocabulary that is activated seamlessly in references to images such as those initiated in the exhibition. Visitors to *Imaginal Expression* would have already seen, on Friday night television or perhaps the news, images comparable to those produced in the interactive environment. The experience was also strange, though, because unlike the news reports

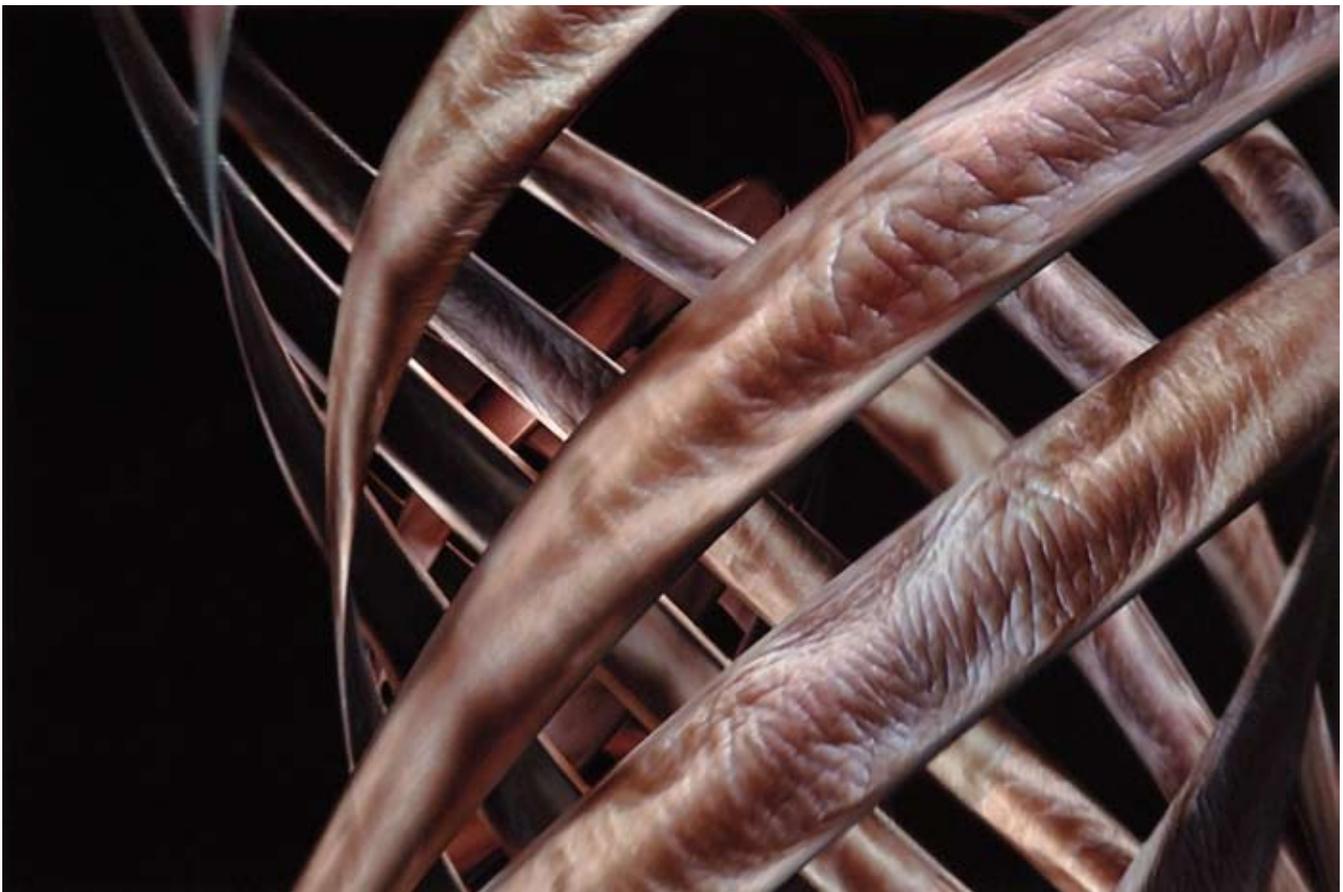


Reva Stone, *Imaginal Expression* at the Surrey Art Gallery

or television programs there was no accompanying narrative instructing viewers on how to organize their thoughts around this event, that even though familiar, somehow does not quite fit with, steps outside of, the pattern of what is already known.

Like Alice in *Through the Looking Glass*, viewers standing in the vast play of images moving across the screen, experienced the uneasy mix of becoming very big and very small by turns. The affective power of this installation, then, is produced in part by these experiences of feeling simultaneously gigantic, because viewers are looking at the smallest elements of the body writ large, and tiny, because of

the monumentality of the images that catch viewers in their light. This sense of uneasiness is further enhanced in Stone's reworking of the inside/outside of the body seen and imagined. She coats images of some of the smallest elements of the body, molecules, with surfaces taken from the body's largest organ, its skin. The synchronous imaging of inside/outside has a number of precedents in the history of art and is particularly reminiscent of the aesthetic functioning in abstract expressionism's dismantling of figure/ground distinctions. The sense of dislocation enacted when this binary anchoring of body to world is disrupted (in the case of Stone's installation, when distinctions between inside and



Reva Stone, *Imaginal Expression #2*, 2000, digital ink jet print on paper, edition of 3 (image size: 71 x 107 cm) SAG 2007.02.01 Gift of Dr. Harold Stone Photograph by Scott Massey

outside are blurred or undone) creates a symbiotic relationship of viewer to work in which the viewer is changed in how they experience the world.

The prints, too, excite such experiences even though the medium, at first glance, seems to be incongruent to such a recall. This is due to the manner in which the prints similarly, but through different means, affect the viewer. *Imaginal Expression #2* (2000), the earliest dated print in the SAG collection, provides an evocative example of what has been described in the arts, philosophy, and psychoanalytic thought as the uncanny: the experience of both familiarity and strangeness that entails an immediate sense, a gestalt, of understanding of that which has not been evident previously and cannot be placed or articulated, alongside the paradox of pleasure and discomfort that such an experience entails. Artists, most notably the Dadaists and Surrealists in the twentieth century, have used the affect of the uncanny as a way of challenging what is hidden or unacknowledged in the common experiences of everyday life. In Stone's work, the medium of the print emphasizes this aspect that is more likely to be subdued in the durational eventfulness of the interactive viewing of the exhibition. A print such as this one calls up the experience of the embodied self as both that which is known and that which remains outside of our conscious reach, a self that can only be "known" in abstraction.

*Imaginal Expression #2* pictures what many viewers will readily recognize as an image of the double helix. But this is a double helix with more than its usual twist. The surfaces of the helix strands have been recoated with images taken from the surfaces of Stone's own body. Once again, this mix of the highly abstracted, computer-modeled inside - protein molecules - with the tactile, recognizable real of the

outside - images of skin, hair, nails - is enough to provoke distinct feelings of unease. It is effective because the image is also compelling and resonant. It pulls viewers into a contemplative state with the immediate recognition of the form represented. But the image also complicates the viewing experience of contemplative appreciation with the disturbance created by the uncanny, in this case a mix or melding of two familiar pictures of what does not coexist in quite this way in real life - the computer modeled double-helix, and the external surfaces of the body.

The prints *Imaginal Expression #4, #5, #7, and #10* (2003) continue this movement into known and unknown territories. Images of Stone's hair and skin, sometimes bruised and scarred, stretch out languidly over the surfaces of protein molecules forming and reforming, dramatizing bioscience's techno dance of the genesis of life. Because the prints are, in relation to the body, of a manageable size (54" X 42") and static, in comparison with the large-scale moving and responsive images in the installation, the viewer has a sense of intimacy, as well as the time in which to think and imagine over the works meaning.

In her practice Stone has worked to gain facility across a range of new technologies that together articulate the increasingly difficult-to-delineate interface between human and machine. Indeed, in a recent interview Stone emphasizes the importance of this engagement with technology: "It's been really critical for me to be [in] way over my head, not knowing how to do what I want to do.... I tend to get the idea and then I have to develop the technology to make the idea come to fruition. That process is really fundamental. For me, what is absolutely critical is that I'm continuously learning."<sup>5</sup> During the exhibition of *Imaginal Expression*, Stone was involved in a Tech Lab residency at the Surrey Art Gallery. *Exchange*,

a project undertaken by Stone during this time, worked in the interstices of consciousness and artificial intelligence. This is a timely investigation as the space between human liveliness and the inert machine is rapidly losing ground.

Stone has often commented on the importance of embodiment in her work and the fact that we only and always come to life in and through our bodies. This is an important fact to emphasize in this age of Internet avatars and biotech manipulation of the human organism. Embodiment, though always singular (no two experiences of embodiment are exactly the same), is never a private affair.<sup>6</sup> All of our embodied

experience comes to us through interactions with the world: with other bodies, human and non-human, with ideas and dreams, with memory, through relationships virtual and actual, and significantly in this context, through interactions with technology. Cell phones, iPods, and ATM machines, to say nothing of prostheses such as pace makers, hearing aids, or artificial limbs (to list some of the more obvious) are daily reminders of the ways in which technology not only shapes but also produces our experience of self. Stone's work has circled around the interactivity of mechanism and organism that form the grounding assumptions of biotechnological innovation.



Reva Stone, *Imaginal Expression #5*, 2003 digital ink jet print on paper, edition of 3 (image size: 71.1 x 107 cm) SAG 2007.02.03 Gift of Dr. Harold Stone Photograph by Scott Massey



Reva Stone, *Carnevale 3.0*, 2000-2002, image courtesy of the artist, photograph by Ernest Mayer

In *Carnevale 3.0* (2000-2002), the artist constructed a robot that attempts to mimic aspects of embodiment in its very form. With this work Stone constructed a cutout, life-sized robotic figure based on a photograph of herself as a young girl. The child-robot was equipped with heat and movement sensors that directed it towards, tracked, and confronted gallery visitors. The resulting interaction between viewer and robot was recorded on video. The video interactions, in their loop through the robot, were recoded as memory and were in turn projected on the gallery walls.

Each time a new video sequence was recorded and simultaneously projected, the robot-child dipped into its memory (built-in data bank storage system) and spontaneously telegraphed random “rememberings” alongside the new footage. In this way, the robot mimicked human consciousness and memory and, in so doing, offered viewers provocative and playful

access to thinking about the interactive flows of technology and human being, and concomitant alterations to definitions of humanness.

The experience of access that Stone provides for the viewer is significant in the sense that her art works with phenomena that are absolutely vital to how our futures will unfold out of this now of the present. This work *matters* in the fact that it is talking about, thinking about, and providing material and virtual avenues of access for us to think about. It provides us with the means to think with our senses, through our embodied experience, about the implications of things such as biotechnological changes to human beings and how these changes will play out their future lives.

The following provides one pragmatic example of the ways in which how we think about and imagine things matters and can actually change the way things are. The extraordinary familiarity the viewer feels in the encounter with the *Imaginal Expression* prints, and the exhibition from which they are downloaded, is so familiar because it is propagated in a myriad of ways, not just by “serious” news reporting on the latest breakthroughs and controversies in bioscience, but also by the litany of extremely popular television shows such as *Bones*, *House*, and *CSI (Crime Scene Investigation)*. These visually enticing programs present entertainment as “knowledge.” Nowhere is this more evident than in the focus on what is being called the “*CSI* effect.” At a national conference of forensic specialists held in Halifax in February 2006, presenters catalogued the ways in which shows such as *CSI* are radically changing actual policing and courtroom practices. Not only is it the case that jurors are placing more importance on forensic evidence such as DNA typing, than on eye-witness testimony, and policing practices must adjust to this,

but lawyers, when interviewing prospective jurors, are choosing those people who are familiar with these shows, because the lawyers feel that a superior understanding of biotechnologies, as gleaned from watching these television programs, allows such jurors to more readily identify gaps in the prosecution's case. Clearly, bio-imaging technologies, such as the one modeled in Stone's exhibition, have impacted the popular imaginary in ways as yet unaccounted for. The ability to maintain boundaries between the imaginary and the real is troublingly difficult as these fictionalized stories produce real-life practices. The imaginary materializes in the world. It *matters*.

Stone is one of a number of Canadian artists recognized for their work in new media technologies.<sup>7</sup> She joined other artists, researchers, writers, and scholars, assembled at the *Interactive Futures* annual conference held in Victoria, British Columbia, in 2006. The annual event is "a forum for showing recent tendencies in new media art as well as a conference for exploring issues related to technology."<sup>8</sup> In addition to new media artists, Canadian artists in other media are also taking their place in the constellation of interests around questions concerning technology and its uses. One such artist is Victoria-based Frances Leeming who recently achieved international attention when the well-known British film theorist



Reva Stone, *Imaginal Expression #7*, 2003, digital ink jet print on paper, edition of 3 (image size: 71 x 106.8 cm) SAG 2007.02.04 Gift of Dr. Harold Stone Photograph by Scott Massey

Jackie Stacey wrote about Leeming's 2005 collage animation titled *Genetic Admiration*.<sup>9</sup>

In theatre, Vancouver's Roundhouse Centre recently hosted *Orchids*, a play written by geneticist and researcher Jeffrey Nisker. The play was written in the context of a project undertaken by Nisker and medical ethicist Susan Cox and examines theatre "as an innovative research tool for engaging citizen participation in health policy development."<sup>10</sup> It works with an investigation of "the concept of normal, and to what extent genetic inquiry and medical guarantee should participate in its quest."<sup>11</sup> Some of these attempts in the arts are more successful than

others, but all are working towards understanding the impact of new technologies on human life and the environment.

In part, the comparative success of these endeavors seems linked to the media they engage. Traditional media such as theatre do not lend themselves to the same complex level of viewer interactivity, as do uses of new media. Theorists such as Katherine Hayles have explored the reasons for this.<sup>12</sup> In short, in this age of technology, it is critical to understand the ways in which the human enmeshed with the machine becomes a human of a different kind. For, as Hayles demonstrates, "the computer molds the



Reva Stone, *Imaginal Expression #10*, 2003, digital ink jet print on paper (image size: 71 x 106.8 cm) SAG 2007.02.05 Gift of Dr. Harold Stone Photograph by Scott Massey

human even as the human builds the computer".<sup>13</sup> The interactivity involved in Stone's work affects the viewer/participant by breaking through imaginary barriers that hold humans separate from computers. The child-robot of *Carnevale* and the imaginary play of the codes that are life in *Imaginal Expression* enact questions concerning technology by bringing the subjectivity of viewers, that is their embodied experience of themselves, into a symbiotic relation with the art/technology, thereby creating a new relation to self and its potential. The human viewer enmeshed with Stone's "sensing machines" becomes a different kind of human. The question is, what kind? The field of interest is large and varied and Canadian artists, particularly those like Reva Stone who are working at the interface of emerging technologies and art, are a significant presence in global efforts to configure futures fit for living.

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Footnotes:

1. Gibson, William. *Pattern Recognition*. New York: Berkeley Books, 2003, pp. 58-59.
2. At its most straight-forward, "new media art" refers to computer-based art, or art that uses computers in its articulation. It is also characteristic of new media art, though not universally so, that it is significant both within and outside of the art world. New media art often deals with issues that have a wide appeal and broad applicability to "real life." That is, new media art is often work in which there is a correspondence between an art-viewing experience and a life experience, such as the popularity of bio-medical imaging used on television and in film that is itself a reference to the uses of such imaging in actual medical situations.
3. While it is the case that these concerns among artists have really come to the fore in the last few decades, these discussions have been ongoing since the advent of computer technologies and cybernetics after World War 2. See N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press, 1999.
4. Artist's statement, 2004. [www.revastone.ca/imaginal\\_as.php](http://www.revastone.ca/imaginal_as.php) Accessed April 18, 2007.
5. Reva Stone quoted in Enright, Robert "The Incredible Lightness of Machines: An Interview with Reva Stone." Winnipeg: *Border Crossings*, Volume 26, Issue 101, March 2007, pp. 56-65.
6. For a discussion of the relation of the body to embodiment see Hayles, *How We Became Posthuman*, pp. 192-207.
7. For those readers who wish to explore this further, a number of these artists are identified in the catalogue essays by Amy Karlinsky and Donna McAlear respectively titled "Downloading Corporeality: The Art of Reva Stone" and "Sensing Machines." These essays can be found in Karlinsky, Amy and Donna McAlear, *Reva Stone: Displacement*. Winnipeg: Winnipeg Art Gallery, 2004.
8. See conference website at <http://cfisrv.finearts.uvic.ca/interactivefutures/> To access Reva Stone's entry: click first on "Sound and Visions" and then on her name in the menu on the left-hand side of the screen.
9. Stacey, Jackie. "Genetic Admiration, Critical Ensemble: A Cinematic Recombination" *Genetic Admiration: A Collage Animation* by Frances Leeming. Toronto: Vtape, 2005. Leeming is also featured in a forthcoming book of Stacey's titled *The Cinematic Life of the Gene*. Durham, NC: Duke University Press.
10. [www.orchids-pgd.ca/research.html](http://www.orchids-pgd.ca/research.html) Accessed June 8, 2007.
11. *ibid.* When *Orchids* played in Vancouver audiences were separated into two groups solicited for discussion of the issues raised. One group met individually with researchers to give private feedback, and the other, comprised of the rest of the audience, was involved in a group discussion, led by researchers in the auditorium at the play's conclusion. These responses were then compiled and integrated directly into the design and implementation of public health policy.
12. See particularly Chapter Two "Virtual Bodies and Flickering Signifiers" in Hayles' *How We Became Posthuman*, for an articulation of this question.
13. *ibid.*, p.47



## Artist's Statement (2006)

### Imaginal Expression

In *Imaginal Expression*, I continue to explore issues surrounding technology's reconfiguration of the human body. The imagery is derived from technological representations of protein molecules that make up the basic units of living cells and direct all biological processes. They are responsible for alterations in the genetic makeup of all organisms. I use these molecular components to provide a visual metaphor through which I can express my questions and concerns about an expanding scientific field that has the potential to change the very nature of what it means to be human.

When I first saw their 3d representation, I realized that I was looking at the most abstract representation of the human body that I had ever seen. Yet their form implied a concreteness that made it easy to forget its original source – the human body. In order to reconnect these extreme abstractions to their original human physical sources, I constructed

three-dimensional models of protein molecules and wrapped them with computer scans of the living body—flesh, hair, teeth, blood vessels, bruising, scarring and aging

In the gallery space, a large, constantly moving "soup" of molecular components is seen projected on the wall. Real time animation based on inverse kinematic physics causes this motion to never repeat. The visitor will initiate a variety of behaviours that alter the molecular components. Some changes are very subtle and others dramatic. In some cases the molecules partly form and then disintegrate, other times they form fully, sometimes they follow the motion of the visitor and sometimes they exchange fleshy coverings when they are in proximity of one another. When a visitor leaves the space, that molecule will degenerate over time. The visitor participates in a continuous cycle of generation, mutation and dissolution.

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Reva Stone, *Imaginal Expression*, two computers, two ATI Radeon 9700 Pro cards, computer visioning system, four video projectors, router, high speed internet connection, as installed at the Surrey Art Gallery, January - April, 2006

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