



Life Forms

front cover image: *NSF (nous sommes fragiles – Nell Tenhaaf and John Kamevaar); TV Breeder, 2011;*
Installation view; Custom LED boards, computer, TV, antenna, speakers; Dimensions variable

back cover image: *NSF (nous sommes fragiles – Nell Tenhaaf and John Kamevaar); TV Breeder, 2011;*
Installation view; Custom LED boards, computer, TV, antenna, speakers; Dimensions variable



Clarington
Leading the Way



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Essay by
James Campbell
Executive Director/Curator

Nell Tenhaaf
at The Visual Arts Centre of Clarington
June 2 – June 30, 2013

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“Humans are unique because, alone among organisms, we are both objects of nature and subjects that can shape our own fate. We are biological beings, and under the purview of biological and physical laws. But we are also conscious beings with purpose and agency, traits the possession of which allow us to design ways of breaking the constraints of biological and physical laws. We are, in other words, both inside nature and outside it.”¹

The preceding excerpt is from an essay, written in 2000, by Kenan Malik. Malik explores the delineation between human beings and the other species with which we share this planet, species who, unlike humanity, “are objects or natural forces, not potential subjects of their own destiny. They act out a drama, not create it.”² Toronto based, electronic media artist and theoretician, Nell Tenhaaf, has been immersed in this drama for more than twenty years. A drama acted out within sweeping primal and contemporary parameters: the human body, genetic predisposition and manipulation, and artificial life.

In her exhibition *Life Forms*, seven pieces spanning 20 years occupied VAC’s three gallery spaces. These works engage and challenge on multiple levels, positioning the viewer within that sometimes uncomfortable realm of the fusion, the intersection, of art

and science. They also confront us with the moral and cultural implications of technology racing forward; the once dreamed of and often feared concepts of cloning, stem cell research, and artificial intelligence, are now scientific realities. In her catalogue essay for a touring exhibition of Nell's work, initiated by the Robert McLaughlin Gallery in Oshawa, Kim Sawchuk observed "The practices of art and science are neither oppositional nor incommensurable: art is not outside of power any more than science is separate from aesthetics."³ Tenhaaf's work resonates with the power inherent in creative insight, and the fundamental beauty of visual truths revealed through science: the stuff of us all, at the cellular level. These visualizations are at times clinically visceral. Human flesh and blood are both manipulating and at the whim of the biotechnology administered through the institutions of medical science.

These considerations are realized with an almost unnerving aura in *Oedipal Ounce of Prevention*, of 1993. Through photographic images within four light boxes, encased by gleaming aluminum frames, there before us as Greek mythology, glow the outer body, and the inner body. The outer body is that of the artist herself. Two off-set Erlenmeyer flasks float to the right, connected only by electrical cords. Within each is an image of human ankles, here symbolically those of Oedipus, pierced by his parents, King Laius and Queen Jocasta, to prevent the prophesized murder of

Laius by his son. Oedipus was then left on a mountain to die, the piercing of the flesh to determine fate. In the two panels to the top left, we react to the ominous potential of piercing of the flesh, of intrusion into the human form, as surgical instruments float with sterile indifference over or beside the flesh of the artist. No surgeon's hand is visible, yet the subject clutches her abdomen, or looks downward and away, with closed eyes, perhaps to delay the inevitable. Below this box, we encounter four more images, three of protein molecules, the inner body at the cellular level, and a final image of an anonymous lab technician's white gloved hands performing tests. The piercing of the flesh is made clean and commonplace through medical science; the visual documentation of the very stuff of flesh made visible via electron microscopy and accompanied by myth. "Moreover, I think that genetics itself has become a mythology, really a folk mythology, in which people imagine so much is possible."⁴ Oedipus was helpless at the hands of his parents. Tenhaaf's piece poses an intriguing question. Are we, as human beings, as a collective society, consciously controlling (or even aware of) the parameters and potential of both the myth and the reality of biotechnological discoveries and their applications, or are we simply being swept along the non-stop flow of scientific advancement?

Accompanying this piece, in our main gallery, was the 1995 work, *Apparatus for Self Organization*.

Underneath a gleaming sheet of Plexiglas rests a simply delineated form, possibly wrapped in a shroud, almost mummy-like, a gleaming oval pod of aluminum and plastic, the sarcophagi. One is immediately pulled to the piece by a hypnotic array of dancing light, alternating on and off within the interior of the form, the sequence controlled by a circuit board within the piece. There is an art historical referent for this piece, as clarified by the artist: "In this work I moved away from the molecular genetic blueprint, and toward the self-organized dynamics of life itself – the on/off play of lights stands for the simplest threshold states of matter. There is an iconographic reference to Marcel Duchamp's Large Glass in the cloud like form: she is bride, female matter itself, and also pure chance."⁵

Nell appropriated the top portion of Duchamp's complex multi-media piece on two glass panels, executed in ca. 1920. The artist has faithfully reproduced the cloud form, or 'halo', that connects to the mechanical 'bride' that descends vertically to the left in Duchamp's piece. Tenhaaf replaces the lead foil and wire employed by Duchamp for the bride's head, or veil, with a minimal rendering of, perhaps, a female face, eyes closed. The three central rectangles, within the cloud's interior, are precisely reproduced from the original. It is within these irregular rectangles that the erratic dance of light plays out, within the cocooned form of bride-female matter. And Chance, or as Nell states: "the intangibles of digital representation."⁶



Apparatus for Self-organization, 1995, View 1; Duratran, aluminum box, incandescent light array controlled electronically by interior circuit board; 107 × 42.5 × 17 cm

It is in the staggered period of illumination, in the random path taken by the light sequence, that chance is implied. Like states of matter, like life forms, they are on, or they are off. One gets the sense of a body scan being performed: light flashes trace internal organs within this female 'matter'. Flashes emerge at reproductive organs, liver, intestines, stomach area, and finally at what may be a heart, "the self organized dynamics of life itself"⁷. As the artist observed, no protein molecules or DNA strands are visible here. It is female form in suspended animation, an internal circuit board controlling the illuminated confirmation that this 'bride' lives.

"Dancing DNA swirls, whirls and twirls. It enhances any space and is enjoyed by young and old. Whoever you are, whatever you do, wherever you place it – your dancing DNA is sure to amaze and delight – it is a kinetic mobile and it is magical."

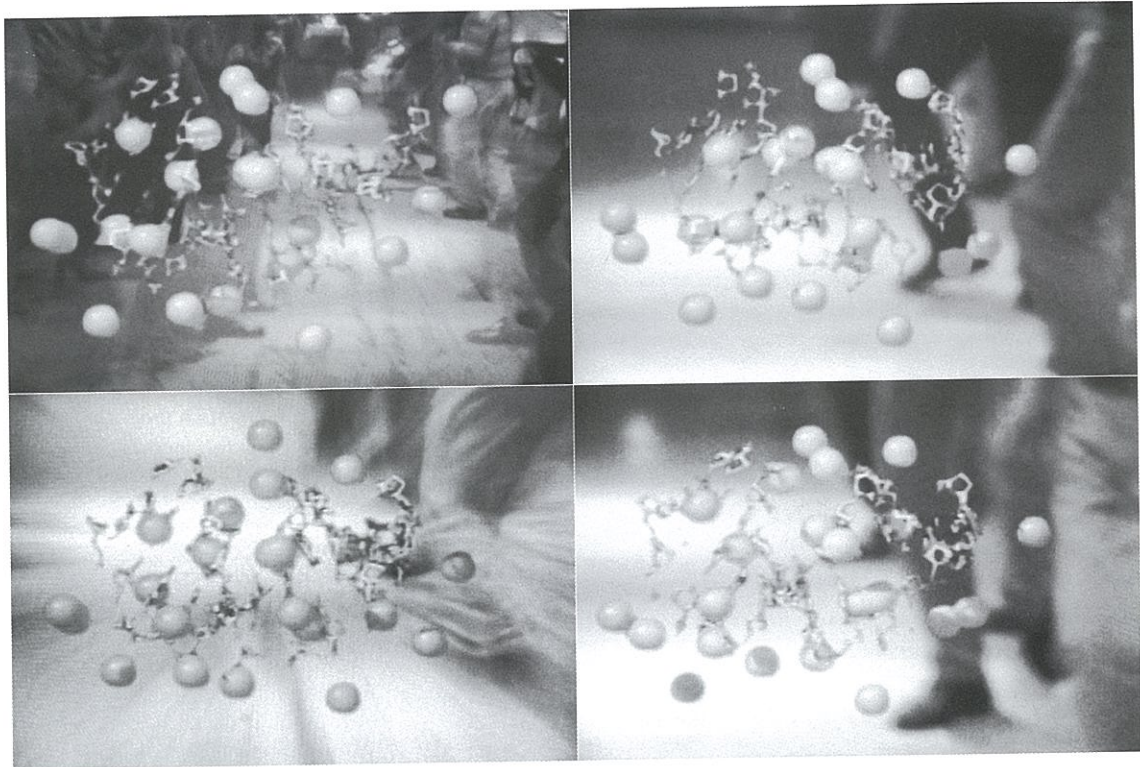
The preceding is an internet sales pitch for a plastic mobile of a DNA strand. The fundamental building blocks of who we are, swirling in our family rooms, illuminated by the flat-screen TV or computer monitor. We have come a long way from 1953, when Scientists James Watson and Francis Crick presented the first correct double helix model of the structure of DNA. Familiarity with that interconnected, twisting swirl of strands and circles is now universal. Research continues as to how these 'strands' are formed, and to what

degree they map the blueprint of who we are as individuals, and as a civilization. These questions have long intrigued Tenhaaf. Our small gallery featured the single channel video projection with sound, *dDNA (d is for dancing)*, produced in 1999.

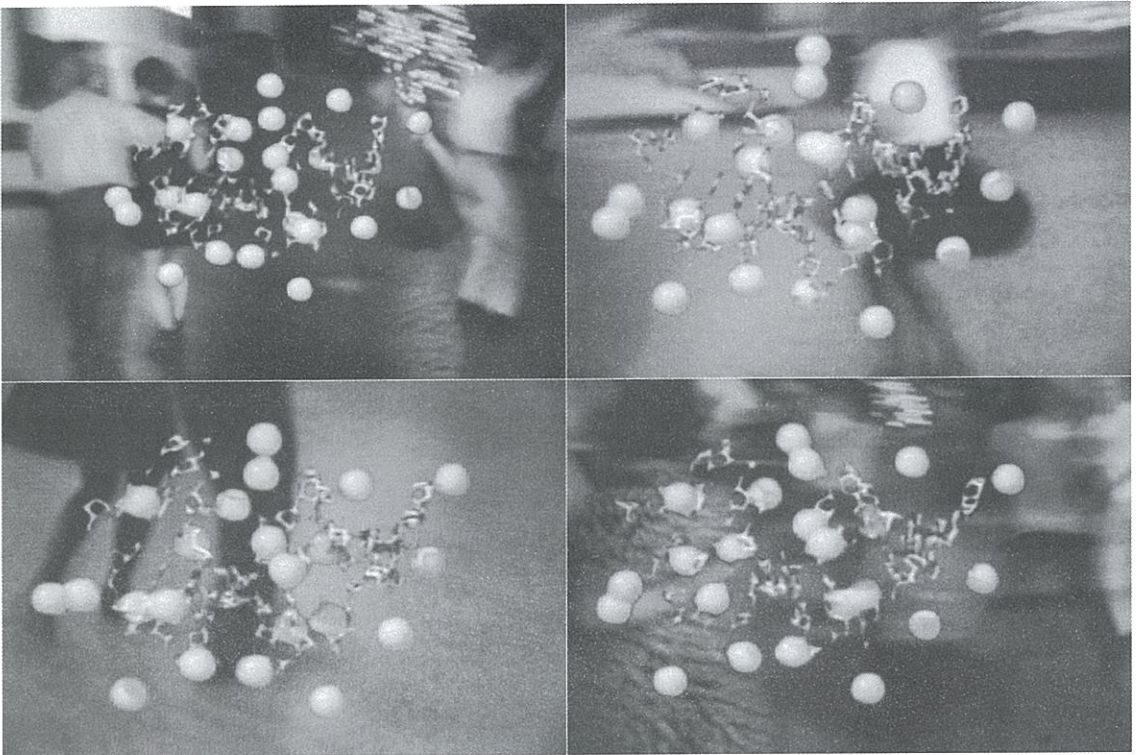
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The artist filmed dance lessons in progress at two locations; a salsa session at Babalou, Toronto, and a swing dance class at Casa Loma, St. Louis, Missouri. The piece was one culmination of ongoing interests and research into the realm of genetic pre-determination, that our abilities, our 'traits' are indelibly printed on our personal genetic map at birth. The artist states "I came across some research proposing that our characteristics aren't absolutely innate, but can become so gradually as a whole population learns a particular skill."⁸ Dance hall group lessons provided the ideal 'laboratory' to observe and record a particular ability being learned by a common group. The piece is a multi-sensory experience. As we stand before the large projected image, the dance hall music reverberates around us. A descriptive narrative by Tenhaaf is also incorporated.

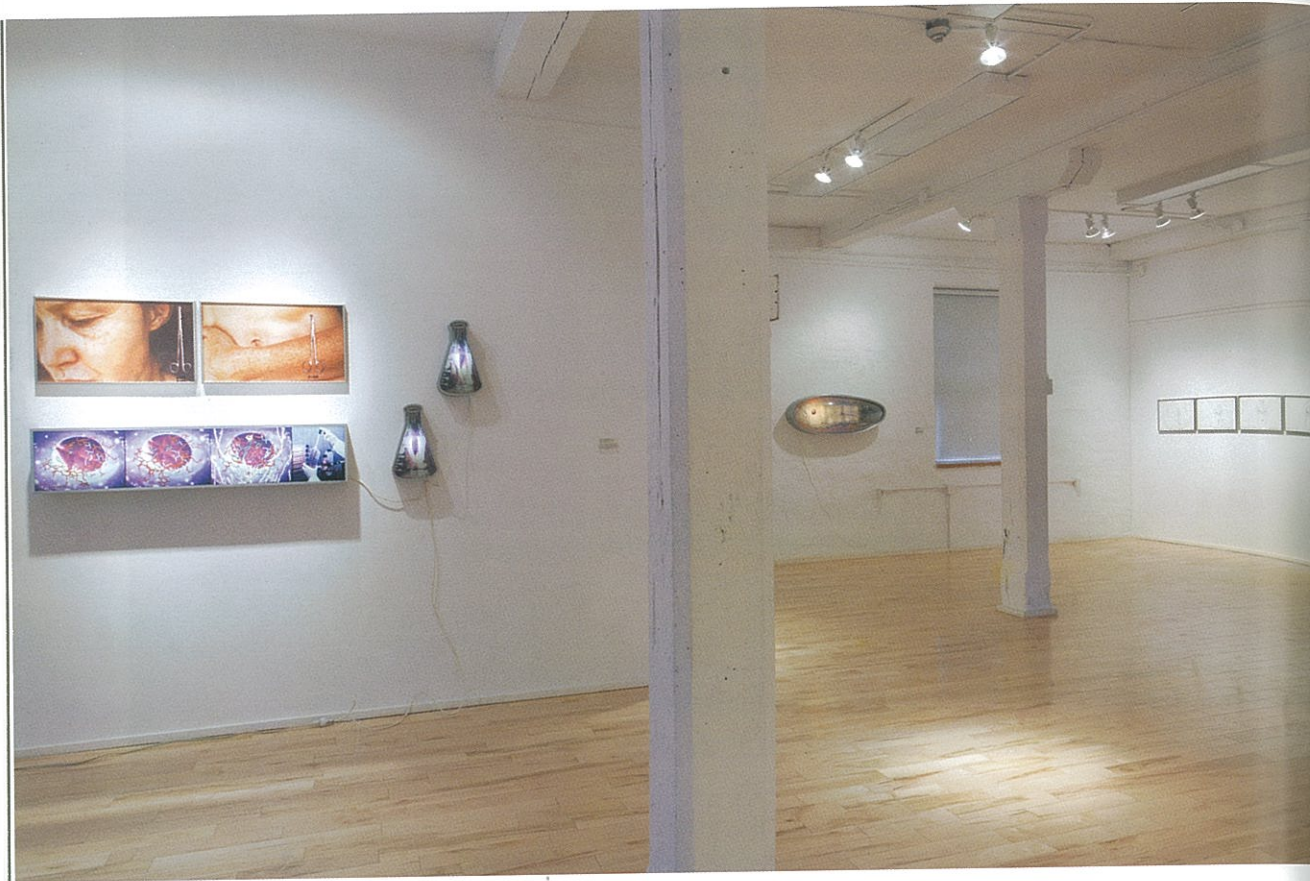
In both Toronto and St. Louis, couples or aligned groups follow the lead of their instructor, moving in synchronous action. As the figures dance, DNA strands appear, and join in the collective exercise. As so eloquently described by our internet pitchman, they swirl and twirl, and do so directly superimposed over the dancing human forms. DNA learning to



dDNA (d is for dancing), 1999; single channel video projection with sound



dDNA (d is for dancing), 1999; single channel video projection with sound



Installation view of *Oedipal ounce of prevention*, *Apparatus for Self-organization*, and *Homunculus (Drawings)*



Oedipal ounce of prevention, 1993; Two framed C prints, fluorescent lightboxes of aluminum, duratrans, plexiglass;
overall 193 x 88 cm

dance, DNA dancing with the life forms of which it is part. Each of the individuals, in the video, is acquiring a new ability. They are doing so as a collective, a common whole. One may extrapolate that dancing (and other forms of creative expression), with the exclusion of perhaps language, is arguably the most familiar and globally recurring human behaviour that, over an extended period of time, has become innate. As Nell summarizes on the voice over, "The trait becomes innate."

"There are few things more human than science. To be human is to disturb the universe, to humanise it, to bend it to our will. Only through controlling nature, and of transcending nature, do we begin to realise ourselves as human beings, as creatures who make our history, rather than simply act it out."⁹

"How dangerous is the acquirement of knowledge and how much happier that man is who believes his native town to be the world, than he who aspires to be greater than his nature will allow."¹⁰

The two preceding sentiments, from Kenan Mailk and Mary Shelley respectively, embody dichotomy. Malik's words, ringing of disturbing human arrogance, propose that it is the just task of humanity to bend and conquer nature, to realise an apex of human existence through charting our own course and fate; all other life forms, make way. Make way for a world where

biotechnologies are embraced, from the gene splicing of cloning experiments, to the ongoing search for employment of stem cell applications.

In the early nineteenth century, Mary Shelley posited the antithesis of Malik's stance in the conclusion of her classic tale, *Frankenstein*; or, *The Modern Prometheus*. Her protagonist dared presume the role of 'God', a creator of life from inanimate flesh. He did so without the altering of genetic codes through hybrid DNA strands, yet the result was parallel: the manipulation of life through science, divine intervention not required. In the end of her masterpiece, the protagonist and the Author lament this audacity; genius is dangerous, she tells us. Humanity should yield to what nature, indeed 'God', has bestowed upon us, not conquer it, as Malik regales. Interestingly, the societal fabric of today contains vocal advocates for each camp.

Our loft gallery housed the debut of a new piece for *Life Forms*. Entitled *TV Breeder*, the piece was a collaborative effort by NSF (Nous Sommes Fragiles), the duo of Tenhaaf and audio artist John Kamevaar. The artists succinctly summarize this hypnotically compelling installation piece: "TV Breeder mixes TV signal into image composite 'parents', which then produce very low-resolution video 'offspring' using crossover and mutation functions of genetic programming. The breeder 'children' are rather childlike: they have the form of LED boards that show simple patterns of



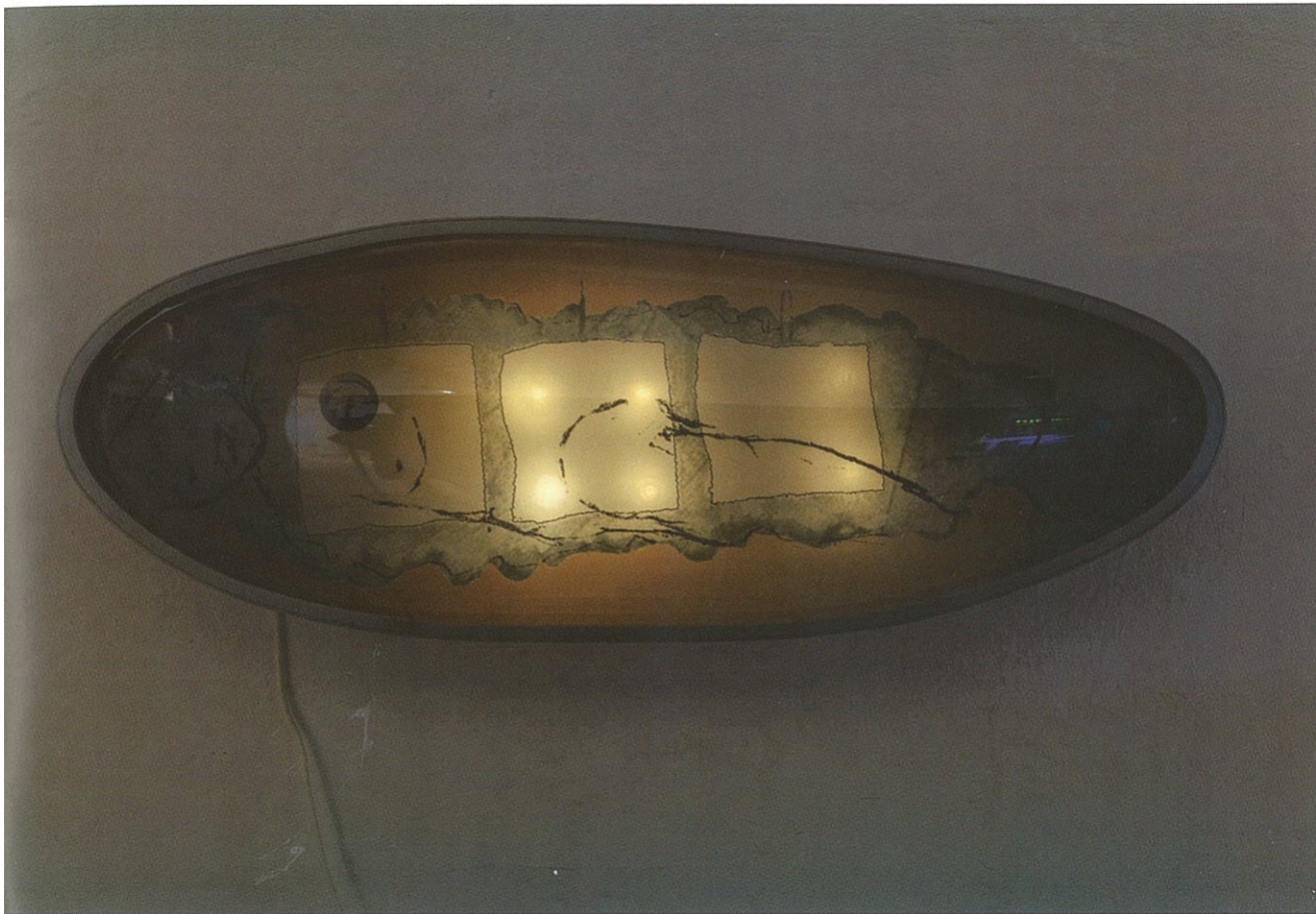
Kaiser Nietzsche performance (John Kamevaar, Nell Tenhaaf, Zev Farber); In the loft at the VAC, June 30, 2013;
Two parts: electroacoustic sound with the *TV Breeder*; electroacoustic sound with Tenhaaf live video manipulation

lights, and they emit a playful sound when they are deemed 'fit' by the programming environment."¹¹

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The multi-component piece sat in the middle of our large loft gallery, revealing an enticing array of two TV monitors, a computer, electrical panels, and several small LED boards, all interconnected by a myriad of cables and chords. Off in a corner of the room was a multiple pronged antennae, constructed by Kamevaar, rather resembling an early Russian satellite. This all important antennae pulled in the initial spark of 'life' for the breeder children, the TV signal that generates 'image composite parents'. These are compared to the 'recording of a few random hours of TVO'. From this source, the evolving offspring either survive, become 'fit', or not. Computer guided 'crossover and mutation functions of genetic programming' assume the guise of mother and father, selecting compatible images. The moment of birth for their children is that instant that one of the LED panels shines 'Fit'.

As viewers stood before this initially confusing array of light and sound, it was impossible not to become entranced by the drama that unfolded. The monitors would flicker with varied images and sounds; the LED panels to their side pulsed numerical sequences until the word 'Fit' shone forth. This moment of 'birth' was accompanied by the aforementioned sounds of delight. It is the creation of an artificial 'life', a life form utterly void of any biological component. Once separated from the artist's hands, and activated in



Apparatus for Self-organization, 1995, View 2; Duratran, aluminum box, incandescent light array controlled electronically by interior circuit board; 107 × 42.5 × 17 cm

the centre of that room, an independent life cycle was triggered, the resulting offspring is purely technological. Much of Nell's work, over the past two decades, has explored the question of traits, of characteristics, being deemed 'fit' by society. In the artist's words: "Who exactly decides what our inherited conception of fitness is and how it is tested, measured, determined, and put into operation?"¹²

Nell uttered those words in an interview with Dot Tuer in 2003. Ten years later, she and John have created a piece which literally removes the necessity of human involvement from that very process. In *TV Breeder*, fitness is ascribed solely through technology, through science. Indeed, the television, the man-made Mecca of popular culture, provides the initial 'spark'. However, once that signal is received by the 'image composite parents', we people are no longer involved. Incoming TV signals and computer genetic programming functions are void of any moral, philosophical, or religious implications effecting the eventual gifting of life, the being deemed 'Fit'. We simply bear witness to the drama. We have no active part in it. In deference to Malik and Shelley, no genetic splicing occurred, no corpses were exhumed for body components. It was particularly enthralling to watch this vividly contemporary process unfold in the loft gallery, with its thick wooden beams and ascending clerestory window area, elements that celebrate the 1905 vintage of the building. The sounds of the LED children traveled up into

that space; 1905 meeting the technological potential of today.

In January 2011, an exhibition entitled "Perceptions of Promise: Biotechnology, Science and Art", opened at the Glenbow Museum in Calgary. The following excerpt is from the newsletter of the Chelsea Art Museum in New York, where it was exhibited in November of that year:

Art has an important role to play in the discourse around biotechnology because it can offer unique articulations of the thoughtfully polarized and often emotionally charged responses the public has toward technology.¹³

In her exhibition, *Life Forms*, Nell Tenhaaf shared twenty years of her unique articulations within this complex and prescient realm. Her work compels us to explore, analyze, and question, not only existing realities within the science of biotechnology, but also its seemingly limitless potential, and especially, the cultural ramifications as that potential is put into practice. ■

Endnotes

- 1 Kenan Malik, *Natural Science (Introspect, August/September, 2000)* 5.
- 2 Kenan Malik, 5.
- 3 Kim Sawchuk, *Nell Tenhaaf – Fit/Unfit* (essay for the exhibition catalogue, Robert McLaughlin Gallery, Oshawa, 2003) 20.
- 4 The Artist, *Fit/Unfit: Nell Tenhaaf speaks with Dot Tuer* (Interview in the exhibition catalogue, Robert McLaughlin Gallery, Oshawa, 2003) 53.
- 5 The Artist, Artist's exhibition notes.
- 6 The Artist, *Fit/Unfit: Nell Tenhaaf speaks with Dot Tuer*, 54.
- 7 The Artist, Artist's exhibition notes.
- 8 The Artist, Artist's exhibition notes.
- 9 Kenan Malik, 9.
- 10 Mary Shelley, *Frankenstein; or, The Modern Prometheus* (Running Press, Philadelphia, 1987).
- 11 The Artist, Artist's exhibition notes.
- 12 The Artist, *Fit/Unfit: Nell Tenhaaf speaks with Dot Tuer*, 55.
- 13 Excerpt from Newsletter for the exhibition, *Perceptions of Promise: Biotechnology, Science and Art* (Chelsea Art Museum, New York, November, 2011).

Acknowledgements

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