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New Media Artists Promoting Environmental Awareness

Artists working in new media are partnering with scientific researchers to raise public awareness about environmental issues such as resource consumption and pollution. The aim of my paper is to highlight the work of Ross Lovegrove (industrial 'green' designer), space artists Tomas Saraceno ("Flying Garden") and Richard Clar ("Collision 2"), Inigo Manglano-Ovalle ("Cloud Prototype No. 1" & "Iceberg"), and Brandon Ballengee (amphibian malformations) while discussing their connections and contributions to the Environmental Art Movement and the conversation circling around sustainability. I will make a distinction between 'Eco-Art', 'Land-Art' and 'Environmental Art' while using these specified artists as a platform to discuss environmental artists working in new media and their contributions to the visual arts. Not only are these artists creating ecologically relevant artwork, but they are also offering a dialog about these issues and possible solutions for the future.

A great deal is being written and said about contemporary artists and their ability to critically discuss important questions of our time; holding a mirror to our modern society. In particular, some are using their artwork as a platform to address the current global environmental crisis. Brandon Ballengee, Inigo Manglano-Ovalle, Richard Clar, Tomas Saraceno, and Ross Lovegrove are all artists that use hybrid practices of art, science, and technology to address ecological issues. These media artists are combining art and technology to acknowledge our resource consumption (eco-footprints) and to promote sustainability. Each one is deeply rooted in the belief that art is nature and underscores the impact that human activities have on our natural surroundings. Even though their works acknowledge the devastation we are causing to our planet, they also seduce the audience into an unexpected interplay between natural order and imminent chaos.

Before analyzing the individual works of the afore-mentioned artists, it would be appropriate to discuss 'environmental art' and how it aligns with the enormous field of eco-art. At the virtual Green Museum www.greenmuseum.org/what_is_ea.php there is a

forum discussing these terms of eco-art, art in nature, land art, etc. stating that ‘environmental art’ is “art that helps improve our relationship with the natural world” while admitting that the definition itself is a work in progress as the discussion continues. In her paper entitled “*Environmental Awareness through Eco-visualization: Combining Art and Technology to Promote Sustainability*” Tiffany Holmes defines eco-art as “art of all media with an ecological theme” but emphasizes that “eco-art tends to focus on singular works that occupy or reclaim a particular geography for a specific reason, such as designing a park on a public landfill,” (page 5). She goes on to differentiate ‘environmental art’ from ‘land art’ while addressing that both are subsets of the larger field of ‘eco-art’. Land or earth artists were coined in the late 1960s when they wanted to break the confines of the traditional gallery space and were concerned with using materials from the natural world “not to promote sustainability, but rather to feed an aesthetic curiosity based on a general appreciation for natural forms,” (page 10). An example of a land artist is Andy Goldsworthy who photographs his ephemeral works in nature. On one hand, an argument could be made that he is an environmental artist because he recycles organic material into his work. However, on the other hand this is an indirect aspect of his process of understanding his private connection and discourse with the natural world. His photographs document a private journey of self-discovery in the context of nature as opposed to raising awareness to the urgency and importance of recycling. Holmes stresses that in the intention of the piece lies the fundamental difference between land art and environmental art; “Environmental art is distinct from the fields of land art or earthworks due to its focus on creating work with a clear focus on issues of sustainability,” (page 10). Therefore, environmental art takes on a more activist

approach and could stem from a variety of mediums in traditional or alternative public exhibition spaces. Thus, for the remainder of this paper, I am limiting the discussion to five new media artists who can be classified as environmental artists because pollution and consumption are driving their scientific and artistic research.

<http://reconstruction.eserver.org/063/holmes.shtml>

Standing at this intersection of research biology, conceptual art and activism is Brandon Ballengee whose work documents his persistent investigation into the rampant increase in physical deformities among amphibians on our continent. In his piece “American Bullfrog with a Third Leg (1998)”, Ballengee sheds light on the effects of water pollution on aquatic ecosystems. His high resolution scans of such mutations show the public a pristine version of reality in our wetlands. The extra limbs sprouting on frogs and toads are caused by an infestation of a waterborne parasite called trematode. Trematodes disrupt the normal limb development in amphibians and favor tadpoles as their hosts. An increased growth of algae in the wetlands due to excess nitrogen from fertilizer run-off has led to increased populations effected by trematodes. Ballengee’s mutated creatures depict the disturbed equilibrium resulting from our human activities. An article from *On Earth* magazine states “Ballengee hopes these strange and disturbing images offer a new way of seeing, an opportunity to mediate on the complexities of human interaction with the natural world.” “The Shock of the New: The eerie beauty of Brandon Ballengee’s

photographs makes us think harder about an ugly phenomenon”. *On Earth*. 28.1 (Spring 2006): 11(1).



Brandon Ballengee, Species Reclamation 2000-8

Ballengee is also considered to be an activist for his work on a database project that will broadcast frog deformities and declining populations on the web. He currently experiments with regressive breeding

techniques to reclaim vanishing species in his work entitled “Species Reclamation”. By breeding amphibians and recreating species of extinct frogs, Ballengee’s art is engaging in genetics and biological revolutions. He also experiments with introducing phosphorescent pigments. The pigments cause his specimens to glow in the dark, indicating the root of the mutation dilemma among various species. In an art review by the New York Times, Ballengee’s work was described as being “Earthbound yet otherworldy... Ballengee play(s) with notions of the planet transformed by human arrogance.” Harrison, Helen A. “ART REVIEWS; The Planet’s Glories, and Some of Its Pains.” The New York Times (Sept 12, 1999): NA.

In his photographs the juxtaposition between the beautiful and the grotesque is revealed. The bright colors and pigments in the frogs are stunning, yet the extra limbs are evidence of the chaos and disruption our fertilizers are wreaking on the ecosystems in aquatic habitats. The natural order created by centuries of evolution and the species’ relationship with the environment is thrust out of balance by these external stimuli.

Also concerned with the interplay of the beautiful and the grotesque is Inigo Manglano-Ovalle who looks towards natural phenomena and weather patterns as a platform to discuss a broader definition of climate. In the series *Art:21: Art in the Twenty-first Century Season 4* Manglano-Ovalle is featured for his work in the ecology themed section and he asks, “What’s beautiful and what’s monstrous, or are they so intertwined that you can’t locate either one of them? This becomes the ethical dilemma, with both artist and viewer trying to clarify where they stand,” (90). His work *Cloud Prototype No. 1*, 2003, was created by capturing a thunderstorm in three-dimensional data by the Department of Atmospheric Sciences at the University of Illinois, Champaign-Urbana. While viewing the data he selected the moment before the storm erupted,

depicting the potential of an incredibly productive force that also has the implication of being highly destructive. The titanium rendering of this cumulonimbus thundercloud was made by computerized machinery developed by the automotive industry for compact cars. “When I make a beautiful cloud, I still want people to think of a nuclear explosion...I was responding to our quest to find weapons of mass destruction and our memory loss of the fact that we actually created them,” (page 90). Sollins, Marybeth ed. *Art:21: Art in the Twenty-first Century Season 4*. Abrams, New York: 2007.



The clouds appear again in his piece “La Tormenta” which hangs in a building for Homeland Security. The storm system serves as a metaphor for immigration waves and the turbulence upon their arrival. The two storm clouds echo the duality of hope and anxiety reflective in the people who pass through the building. “Clouds are a metaphor for transience of an unfettered journey dream of displaced person – promise of postmodern world without borders.” Therefore, Manglano-Ovalle references the term ‘climate’ not only in a meteorological sense but also looking at our current sociopolitical economic atmospheres. Leslie, R. “Inigo Manglano-Ovalle: Max Protetch Gallery.” *Art Nexus*. 2.49 (June/Aug 2003): 132(3).

In general, climate is composed of permeable systems that affect other systems. “Iceberg (r11io1)”, 2005, specifically raises our awareness towards the effects of global warming. This sculpture composed of a network of interlocking, anodized aluminum tubes and mixed mediums 25’x20’x18’ captures a frozen moment in time. It was

suspended from the ceiling, encircled by a spiral staircase at the Art Institute of Chicago. This seemingly weightless form was actually the skeleton of a 460 foot-long iceberg in the Labrador Sea. It took its shape from radar and sonar scans of the topographical outline and core volume of the actual iceberg. This process of using scientific data as the groundwork for contemporary sculpture places Manglano-Ovallo on the forefront of environmental artists using new media. Although his process involves the organization of data, barometric pressure, wind speed, wind direction, etc, the chaos lies in the sculpture as a potential container for a natural catastrophe. Snodgrass, Susan. "Inigo Manglano-Ovallo at the Art Institute of Chicago." Art in America. 93.10 (Nov 2005): 187(2).

Patricia Briggs wrote a review of the Iceberg in Artforum International Magazine commenting that the "threat of global warming, is signaled by the iceberg's tilted position. Objective representations of nature thus intersect with more ideologically loaded images." Indeed the icebergs and clouds are bodies of unimpeded motion symbolizing the global effects of environmental devastation, while serving an allegory for migration and immigration. Briggs, Patricia. "Inigo Manglano-Ovalle: Rochester Art Center." Artforum International. 45.3 (Nov 2006): 304 (2).

As Ballengee and Manglano-Ovalle are addressing the effects of pollution on aquatic ecosystems and global climate changes, Richard Clar has turned his attention to how our consumption rates are affecting outer space. Clar is a featured artist in *ASPECT: The Chronicles of New Media Art* in volume 6 "On Location". His project *Collision II* contains commentary by Jean-Luc Soret, curator and co-founder of the International Festival @rt Outsiders, Masion Europeenne de la Photographie in Paris. The Festival @rt Outsiders was launched in 2000 and annually showcases digital art and cutting-edge creations around a theme. *Collision II* was presented to the public during the 2003

festival entitled "Space Art" and can be viewed on the web at www.arttechnologies.com/site-2005/projects.html.

Clar is calling attention to the problem of orbital debris in space; broken satellites, machinery, and pieces from explosions contained within the three kilometers surrounding our atmosphere. Clar's three-dimensional image of the planet portrayed with small colored flecks circling it is visually stimulating while quite disturbing at the same time. It is mesmerizing to watch these specs of color orbiting the planet, but the realization of the amount of "trash" that is actually circling earth and the reality that we are polluting space causes concern. The havoc that humans are wreaking on the space surrounding the planet is intensified as some specs glow brighter signifying collisions of orbital debris. Clar defines Collision II as "a dynamic orbital debris site-specific artwork currently in sun-synchronous orbit at an altitude 450 to 900 km above the earth" on his biographical page. A disturbing statistic is that the U.S. Space Command actually tracks over 10,000 objects of orbital debris and predicts their orbits for launchings of spacecraft. Clar, Richard. Collision II. ASPECT: The Chronicles of New Media. DVD. vol. 6 (Fall 2005).

Soret was interested in enhancing the viewer's visual experience and wanted the image to appear to be floating in space. Using a multimedia device by Imagine Concept, the viewer is able to see Clar's documentation of orbital debris in a three-dimensional volumetric effect. Soret comments on the ASPECT DVD that he wanted to share "the extremely high emotional and aesthetic pleasure" that Collision II produced for him with



the public but that "a conventional screen or projector would not suffice."

In addition, an article in Art Business News credits Clar for "taking his art where few men have gone before" and speaks about

the environmental awareness aspect to *Collision II* that is apparent in his work. "American artist Richard Clar has taken his art where few men have gone before—space". *Art Business News*. 30.13 (Dec 2003): 48(1).

Indeed some of the artists working under the umbrella term of "Space Art" are pioneering a new frontier with a futuristic approach to stimulate our global perspective and are asking the public to develop a social consciousness. As Richard Clar works with the U.S. Space Command, other artists are also working closely with scientists and engineers for global solutions.

It therefore seems appropriate to define the category of 'Space Art' and discuss how space artists may also be considered environmentalists. During his commentary and in the press release for the festival, Jean-Luc Soret defines Space Art as

"all contemporary artistic practices that are inspired by space research or space activity.

It is, therefore, not an aesthetic current that imposes shared formal rules of presentation or representation, but rather an artistic current defined by a subject: space, drawing on a community of passionate, lively interests by an infinite scope of investigation that is as yet little explored". Soret, Jean-Luc. *Collision II. ASPECT: The Chronicles of New Media*. DVD. vol. 6 (Fall 2005).

An online search for images for "Space Art" brings up several representations of cosmic bodies, screen savers, etc. Should these images be placed in the same category as Richard Clar and other contemporary artists concerned with the final frontier? Prior to Jean-Luc Soret's definition, it was very difficult to define 'Space Art' because imagery containing an imagined or generalized subject of space, artwork left in space (The Moon Museum, a small ceramic tile left by Apollo 12 in 1969), artwork concerning our orbital environment, and artwork addressing the integration of space and cyberspace were all lumped together under the umbrella of "Space Art." www.olats.org/space/texts/beyond.php

In an article of Leonardo Online, Annick Bureaud also raises crucial questions

pertaining to Space Art in the article "Space Art: Defining a New Territory". For example, "Can an artistic genre be defined by its subject?" Perhaps Space Art is too new at this juncture and in time it will be seen in a more historical context and categorized by "the aesthetic and conceptual questions that are dealt with by the works."

<http://www.olats.org/space/texts/newTerritory.php>

On his website, Richard Clar has posted a definition for Space Art which he works under from Roger F. Malina, Astrophysicist and Executive Editor of *Leonardo: The Journal of Art, Science, and Technology*: "Contemporary art which relies on space activity for its implementation." <http://www.arttechnologies.com/site-2005/space-art.html> Therefore, an argument can be made that Clar can be classified as both a space artist and an environmental artist because he is working within the contexts of space activity, pollution, and sustainability.

Yet, another artist working as a space/environmental artist is Tomas Saraceno who constructed *Flying Garden* and *Air-Port-City*, several hovering clusters of transparent bubbles made from an advanced aerospace material. Functioning as a prototype for a solar powered cloud, these spheres resemble a floating utopia hovering above earth to solve our population and consumption problems. Here, a strong connection can be made to Mangano-Ovalle's clouds as suspended bodies drifting above the realm of physical borders. In order to survive, Saraceno proposes possible habitations in the sky. There is a visual elegance to his work but it raises a serious question surrounding sustainable human environments. He is proposing a new order of survival after our planet's surface becomes too chaotic.

Another work by Saraceno which addresses suspension in the clouds is "*The*

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Endless Photo" taken in 2006 12,000 feet up the Andes in Bolivia's Solar de Uyuni, a 4,600 square mile mountain lake only an inch deep. As the largest salt lake in the world, it reflects the sky and visitors have a physical sense of walking on the clouds. While some art critics might lump Saraceno under the category of "Sky Art" he is classified as a "Space Artist" for his use of aerospace materials and addressing new concepts of synergy. At an interview for his exhibit at Berkeley, Saraceno said, "Like continental drift at the beginning of the world, the new cities will search for their positions in the air in order to find their place in the universe...capable of imagining more elastic and dynamic border rules for a new space/cyberspace." <http://www.bampfa.berkeley.edu/exhibition/224>

Combining natural forms with futuristic ideals, interior designer, Ross Lovegrove, is concerned with green design. His design for a chair, entitled "Go Chair" is sleek and efficient while demonstrating conservative use of materials by emphasizing organic negative spaces. "Seen as defining a new aesthetic for the 21st century, born out of an anatomical approach to form and produced in light of the advanced principles of automotive precision manufacturing, the Go Chair was selected by *Time Magazine* as one of the finest examples of design in the year 2001." Lovegrove, Ross. *Supernatural: The Work of Ross Lovegrove*. New York: Phaidon, 2004. The careful observation to natural forms is evident in this piece of furniture by Lovegrove with the legs resembling a praying mantis. Mark Rappolt eloquently wrote: "While it (the Go Chair) definitely has a Natural History Museum-style boney insect look, the fact that it's made of pressure die-cast magnesium gives it an ultimately futuristic feel." Rappolt, M. "Go With The Flow." *Modern Painters* (Apr 2006): 40(3).

In an interview online, Lovegrove describes his early experiences in design: "I traced and documented over three months the decomposition of a tomato as a kind of

scientific document so maybe I am a frustrated researcher! However, I do see these ideas as highly relevant to design and architecture." <http://www.designmuseum.org/design/ross-lovegrove> In addition to tomatoes, Lovegrove also surrounds himself with natural forms such as seashells and skeletons which adorn his studio space. Pearman describes Lovegrove's studio (Notting Hill, London) in great detail and speaks about his "never-ending line of inquiry": "Nature, after all, has a habit of springing surprises. Lovegrove works to make those surprises both pleasant and inevitable." Pearman, Hugh. "The Spirit World". Design Week. vol. 19 (10 June 2004): 14(2).

In addition to observing nature, Lovegrove is also inspired by ecology and measures that we need to take as a global community to reduce our carbon footprints. His current projects involve finding a solution to curb car emissions by designing a solar powered vehicle. In her article "Objects of Affection", Kabat writes about an exchange between Lovegrove and a man in a parked car who was just running his engine. "Now



the self-styled 'Captain Organic' is turning into an eco-warrior." Kabat, Jennifer. "Objects of Affection". Metropolis. vol. 25 (May 2006): 146(7), 181. Lovegrove is thinking about form, fluidity, sensuality, and efficiency while manipulating naturally found objects with new media. He works in a conceptual context with advance software, and is pioneering new high-performance materials with

scientists such as biopolymers. In his book he states, "I wish to create products that are only made possible by the technology of the times in which we live, thereby helping to enrich our perception of modernity and progress," (page 37).

According to Lovegrove, "organic" implies fluid structures and "essentialism" is

the search for the natural essence of a physical object. He achieves his abstract forms by studying nature and manipulates organic forms with technology. He believes that both should be intertwined in order to make sensual design. Studying the unbridled way that nature nurtures evolution, he is interested in liberating form to its bare essentials so that the end product is lean and efficient. This belief is rooted in his goal to elevate the public's perception of contemporary design so that a respect for the earth translates into products for everyday life. "Lovegrove refers to his way of working as 'organic essentialism'...from an artistic point of view his designs are minimalist, frequently inspired by natural form, yet obviously fabricated using the very latest technologies."

Rappolt, M. "Go With The Flow." *Modern Painters* (April 2006): 40(3).

His title 'Captain Organic' is a philosophical and aesthetical decision where intelligent forms stem from D.N.A or design, nature, and art.

http://www.ted.com/index.php/talks/ross_lovegrove_shares_organic_designs.html Lovegrove embodies this philosophy when he says, "The notion of organic essentialism in simple terms is the intelligent evolutionary economy of form in unison with what you need – nothing more. I am not interested in trying to push anything further than what is ultimately essential. I believe that if I spend the time to study the earth, evolution and time, it will give me something that is organic, biological and where form grows where you need it. That's what nature does and that's how I design." <http://www.designmuseum.org/design/ross-lovegrove>

In conclusion, Ballengee, Manglano-Ovalle, Clar, Saraceno, and Lovegrove are working on the cutting edge of technology and are taking their art to the extremes.

Ballengee has gone the distance to genetically engineer endangered species of frogs, and Manglano-Ovalle's colossal structures signify the impending doom of global warming.

Clar's artwork extends into earth's orbit while Saraceno takes the viewer to ultimate

heights. Finally, Lovegrove provides possibilities for 21st century design. Another commonality is their strong intention to heighten public awareness of various environmental issues. From topics such as the pollution of our aquatic habitats, the effects of global warming on weather patterns, orbital debris in space, gardens growing in the sky, to possibilities for green design, these artists create art with the intention of sustainability. While they may be classified as biogenetics, space artists, or industrial designers, they all fall under the umbrella of environmental artists working with new media. I think it is important to credit these artists for blurring the lines between art science and technology. They express their environmental opinions through contemporary mediums that captivate audiences visually and intellectually.

Citation of Photographs in order of appearance:

“Species Reclamation” 2006 by Brandon Ballengee, digital photograph found on:

http://blog.wired.com/photos/uncategorized/2007/10/29/biotechnique_dfa_23_khm_from_the_s.jpg

“Cloud Prototype No. 1” 2003 by Inigo Manglano-Ovalle, installation view, *Purgatory*, exhibition at Max Protetch Gallery, New York. Fiberglass and titanium alloy foil, 132 x 176 x 96”. Found on:

<http://www.dhub.org/blog/wp-content/dhub/art21-pr-manglano-04.gif>

“Collision II” 2003 by Richard Clar site-specific work found on:

<http://www.arttechnologies.com/site-2005/projects.html>

“Flying Garden (detail)” 2003 by Tomas Saraceno, installation view, *Reconstruction 1*, exhibition at Sudeley Castle, Gloucestershire. Found on: http://www.tanyabonakdargallery.com/artist.php?art_name=Tomas%20Saraceno

“Go Chair” 1998-2001 by Ross Lovegrove, magnesium; polycarbonate plastic seat; 30.5 x 23 x 27”. Found on:

<http://www.designmuseum.org/design/ross-lovegrove>