01 2007

When Art Becomes Life

Artist-Researchers and Biotechnology

Claire Pentecost

In the year 2000 artist Eduardo Kac made network television news with an announcement that he had commissioned the “creation” of a transgenic bunny named “Alba.” The PR campaign included an iconic image of a rabbit photographically enhanced to appear green since the green fluorescent protein (GFP) expressed by the DNA extracted from the jellyfish *Aequorea Victoria* and spliced into the zygote of one of Alba’s forebears only shows under a special spectrum of light. Kac claimed as his work, *GFP Bunny*, all the discussion that would arise from this act of guaranteed controversy, as well as the social integration of the rabbit via his family. The controversy and dialogue is selectively documented in a number of ensuing works, all widely publicized. The proposed social integration was transmuted into a campaign to “free Alba” as France's Institut National de la Recherche Agronomique where the rabbit was produced refused to let it leave the premises amid some dispute as to the nature of the agreement.[1] The details of this bit of controversy do not seem to have been claimed by the artist in his book on the subject, his photographs of Alba-laden newspapers being read in glamorous settings, or his interactive screen piece in

which audiences can collide Alba headlines to make recombinant biotech buzz texts.[2]

For many people in the general public *GFP Bunny* may have been their first exposure to art of this kind. In the art world, where curators, institutions and pundits are quick to plant flags on new islands in the stream, it has acquired a name: "BioArt." The subgenre was extant for some time in various more and less technologically mediaphilic forms well before y2k. The first exodus of artists from the landscape-bearing canvas and into the natural environment occurred around the time the planet's inhabitants were becoming aware of spaceship earth, a mothership needing parental stewardship itself. Artists like Robert Smithson and Michael Heizer applied the tenets of conceptual and minimalist art to the field in the 1960s; a full-blown genre soon flourished incorporating the first-generation environmental movement, feminism and the utopian perspectives of the 70s. Now the contemporary art corresponding to the earthworks of a previous generation integrates new technologies, cognizant that technology as much as anything sets the terms of the human relationship to the natural. Nothing makes this more clear than the biotechnologies elaborating the meteoric rise of the life sciences in the thirty-five years since the first Earth Day in 1970.

In May of 2004, I found myself trying to explain an artist's legitimate use of high tech biological equipment to FBI agents in Buffalo, New York. I had flown from Chicago to be with my friend Steve Kurtz, a founding member of the artist collective Critical Art Ensemble (CAE), the day after his wife died suddenly in her sleep. When the police came to investigate the death, they found a table laden with laboratory supplies and, baffled by the explanation that Kurtz used this equipment in his art, they called the Joint Terrorism Task Force. When I arrived the next day, the FBI had

also arrived to detain Kurtz and lock him out of his house pending a search, which included confiscation of all his research materials including two computers and many personal records. I was detained and questioned along with my friend. Attempting to account for such art was not a new experience for me, but the circumstance, a friend under suspicion of bioterrorism, gave it a novel urgency.

This detention turned out to be illegal and after 22 hours – as soon as Kurtz was able to contact a lawyer via cell phone – we were free to go. Everything CAE has done in its 18 year history has been public, much of it staged with the support of established arts institutions; their work is documented on their website and in a series of books published by Autonomedia press, as well as by numerous independent articles.[3] Still, as the U.S. Justice Department pursued an investigation of Kurtz, many of his associates were called upon to explain the nature and validity of this kind of art to the press and members of the public.

It was quickly apparent that the case was giving us opportunities to speak publicly about the very issues that CAE's art activities intended to bring to the public. For the previous decade their work had focused primarily on the implications of various applications of genetic engineering. The government had confiscated the equipment of a mobile lab for testing processed food for genetically modified ingredients; the research they confiscated was for a new project on the diversion of resources from public health to new biodefense programs. Some time after Steve Kurtz's nightmare began (it continues; more on that soon), I set out to formulate not only a justification for artists' participation in the sciences, but also a set of criteria for such endeavors. Given the current role of the life-sciences as drivers of economic gold rushes and techno-scientific advances benefiting a tiny part of the world's population,

the point of proposing criteria is to sort out projects that seek to interrupt those trends from those that ultimately reinforce them.

Is the Bio- in Biology the Bio- in Biopower?

The explosion of well-funded specializations in biology, notably under the rubrics of genetics, bioinformatics and biotechnology, is very much a function of the ways biology has been adapted to the mechanics of the doxa of our time, neoliberalism. As a political economic theory, neoliberalism maintains that individuals and society flourish best when government confines its function to the guarantee and protection of private property, free markets and free trade. This ideology has achieved extraordinary influence through its association with moral notions of individual freedom and human dignity, especially vis-à-vis their perceived enemies: the totalitarian regimes of communism and, since the end of the cold war, Islamic fundamentalism. Promoted this way, the universal human desire for such a system is taken to be self-evident.

Via this ideology anything humans value becomes legally articulated as something to be owned by one party literally at the expense of another: not only real estate, material products and technological inventions, but also the basics of life, health and safety: knowledge, creativity, nutrition, sanitation, medicine, water. Consequently (and certainly not only in the sciences) we have seen a transformation of the living world into limitless possibilities to stake legal property and an inalienable right to profit. Add to this a jurisprudence that grants corporations the rights and protections of individuals and a *de facto* privilege for that status when held by a corporation as opposed to actual individual persons. Situate this in a system of public research and educational institutions that, again in accordance with neoliberal principles, has been gradually

defunded and so relies increasingly on corporate partnerships and the generation of patentable, marketable knowledge products.[4] Then drive this entire system around the globe via brutal trade agreements in which intellectual property regimes are enforced by the world's military and economic superpower.[5] This is the context of the life sciences today.

Under neoliberalism, the governance of the vitality and fertility of whole populations, which Foucault conceptualized as biopower, is arrogated by market forces. In the U.S., increasingly, pension funds and retirement plans, proper diet and sanitation, vaccination and antibiotics, managed fertility and extended longevity are transferred to the domain of the private under the primacy of the right to property and individualized prospects. The promotional apparatus of both biotech research and the market economy promises access to an idealized norm of a continually improved human existence. Obtained at the level of the individual body, it is sold at the level of the mass media, and decisions for the entire population are made on the premise of its widespread availability. However, if it comes through at all, it will only be available to those with the means to purchase it on the market.

Of course there are myriad ways that artists may involve themselves with the panorama I have just condensed. I am proposing a criteria that assumes the artist wants to address a kind of problem in the world where most people live: Science in the service of neoliberalism alienates the nonspecialist whose life is profoundly affected by its commercial application. I am not making a case against specialized knowledge *per se*, which will continue to prove authoritatively recondite to the nonspecialist in many contexts. It is the refiguration of science, still vested with traditional claims to truth and service to the public good, while shaped to narrow market agendas, that requires a new enfranchisement of a broader

scope of society. Current mechanisms of alienation which thwart public contestation can be sorted into three principle categories: first, abstraction and mystification; second, the ambiguous nature of funding, i.e., whether public or private, which effectively obscures the interests involved; and third, legal instruments designed to protect knowledge as trade secrets or private intellectual property. These include patents and material transfer agreements (MTAs), which govern the use of biological research materials as intellectual property. In my schema, the artist-researcher is a person who interrupts these barriers on behalf of herself and other members of an alienated public. Figure 1 diagrams how this might work:

Figure 1

I list possible methods of the artist in categories loosely corresponding to those of alienations: staging of scientific procedures in participatory theaters to provide experiences of the materiality of science; initiation across specialized knowledge fields enfranchises nonspecialists to author new narratives with a perspective on the real stakes involved; playing the amateur, the artist takes pains to find collaborators within scientific fields and / or consents to become a "thief" of privatized knowledge in order to politicize or at least problematize this sequestering.

Is the Bio- in BioArt the Bio- in Biopolitics?

Although Steve Kurtz did find a collaborator, he has been accused of being a thief. Both Kurtz and his longtime colleague and collaborator, Dr. Robert Ferrell, Professor of Genetics at the University of Pittsburgh, were indicted for mail fraud and wire

fraud. The laws on which these charges are based have nothing to do with bioterrorism; they have to do with property.

Allegedly Ferrelll helped Kurtz obtain $256 worth of three harmless bacteria commonly used in biology labs. Some biological samples are regulated because they pose health risks, but all commercial biological samples are regulated as property. They are regulated through Material Transfer Agreements (MTAs), signed by the Principle Investigator of the lab and promising not to share, reproduce, sell, or give away any part of a purchased material whose reproduction (it's alive!), once it's in the hands of the consumer, is impossible to control. In biological research, sharing of samples and other materials is about as common as sharing music has become to a generation of listeners weened on digital technology.

Though the case of Ferrell and Kurtz may seem one more casualty of government's overreach in "exceptional" times, it is actually one of a number of cases demonstrating the potentially serious consequences of disrupting business as usual in the sciences. We see here the extent to which fields of expertise are protected not only by the traditional mechanisms of professionalization, but now also by legal exclusions erected in the name of property (if not national security). Enforcement of most laws is more or less discretionary and the determination of whether or not a "violator" will be prosecuted turns on the amount of property they are diverting, or how much they insist on politicizing their own actions.

For about a decade CAE's work has addressed precisely the kinds of problems in the applications of biotechnology I have outlined above. Most of their projects take the form of participatory theatre staged in museums, cultural centers, universities, and other venues as diverse as hospitals and farmers' markets, in which audience

members may acquire hands-on experience of laboratory practices and discuss the question of whose interests are served by the current marketing and regulation of these technologies. Their projects are created to provide access to people of many different ideological positions, but their writings never elude or mystify the political dimensions of their subject, whether that be the eugenic tendencies of technologically assisted reproduction or the impossibility of adequately regulating genetically modified foodstuffs which have yet to be tested by independent scientists.

When creating my guidelines for evaluating BioArt, I first focused on how artists can better entitle nonscientists to the decisions that drive scientific priorities. In the process I realized I had to acknowledge the need for the artist to overcome barriers to another well-guarded field: art itself. The stakes may seem less urgent, but if artists are going to lend autonomy to their audience vis a vis the economic and political bulldozers of our time, they must intelligently strategize to overcome the historical legacies that have accumulated to alienate most nonspecialists from the work of professional artists.

The reorganization of value that has accompanied the social and psychic disruptions of the twentieth century has accustomed the public to the continuous migration of art onto unexpected terrain. Of course, this doesn't mean the public understands or cares much about what artists actually do. Throughout the last century the continuous need of fine art to distinguish itself from mass media and popular entertainment has kept the language and logic of high art in an arcane if elite margin where prestige and commerce seem to play by rules of their own. Most of the major discursive and practical interventions in standardized fine art practice that have been historicized as movements have implied or explicitly pursued new or altered strategies of distribution, as the innovations of

artists throw curves into this reception device. One may think, for example of the impressionists and the Salon des Refusés, Dada and surrealist artists exhibiting in cafes and cabarets, circulating posters and experimental publications; Fluxus artists, the Artist Placement Group, the magazine inserts of conceptual artists, performance art, mail art, cable-access and activist video, community-based art, net.art, etc. However, what is retained at the level of the canon is purged of the disturbance to authorized forms of creativity and unidirectional, centralized distribution.

The problem is not just that change in these arrangements destabilizes the investment of billions of dollars, but that change in these arrangements requires validation of other forms of art, artists and creative practice. This in turn destabilizes the charge of the existing distribution system to produce a firm distinction between the professional artist and the amateur. In a society built on democratic ideals, this takes a lot of energy to sustain, and may be one of the reasons why the fine arts are marginalized even as "creative industries" charge ahead.

The tradition in art practice known as "institutional critique" is largely defined by works critiquing the systems that perpetuate the fine arts as a specialization. An examination of that history suggests that without the grounding of ethical aspirations that reach beyond the concerns of art as narrowly defined, such a critique too easily becomes yet another wave of self-congratulatory knowing claimed by insiders. It does little if anything to redraw the boundaries of specialization that threaten to deform all categories of human interest when fortified by exaggerated economic speculation. While specialization of knowledge has clearly accomplished great things, the commercial and legal entrenchment of exclusion incurs systematized ignorance, generalized alienation, stunting of individual potential, and the long-term social damage of

incomplete perspectives. My schema therefore requires a double to take into account both of the disciplines comprising BioArt:

Figure 2

Criteria in the Ecology of Reception

What I have proposed is not a point system or checklist, but rather a set of guidelines intended to expose the unique causes and outcomes of artistic efforts, which by their very nature steer us into the territory of the unquantifiable.

Eduardo Kac claims that in the age of biotechnology the artist's role as creator now extends to life itself. Along with playing the piece for sensationalism, the press seemed happy to correlate the bold image of the artist with a forward-looking industry. One may conjecture that it is just this connection and the possible impression of irresponsibility engendered therein that the scientists at the Institut National wanted to avoid in the wake of the mad cow and the foot and mouth scandals that had recently shaken public confidence in the UK and Europe. For all its availability to a general public, *GFP Bunny* remains a well-executed fetish object sustaining the mystification of creativity and the opacity of partnerships, ownership, knowledge partitions, and the complex, embedded status of biotechnology in oligarchic corporate structures.

The work of CAE provides a counter example; another is artist Brandon Ballengée, whose projects are also about creating points of access, not so much to laboratory as to field methods. For over a decade, he has conducted serious field research in wetland and other ecosystems, to make contributions to scientific institutions, ecological reclamation efforts and to environmental education

through innovative visual forms of documenting his findings. Areas of special interest include toxic algae blooms, amphibian population decline and deformities, and the legacies of atomic and chemical pollution. Although he exhibits his work for the art-seeking public in the relevant institutions he also integrates contact with other populations into phases of the research and production of his projects. To this end he designs and teaches workshops in ecology, field biology, evolution, genetics and digital imaging for schools and the general public at urban and rural parks, museums, zoos, pet stores and fish markets, and artist residencies.[6]

Equipped with a formal education in the arts and not in science, he models the tradition of the amateur naturalist who has much to contribute. Nowhere does this continue to be more germane than in the still young, complex and underserved discipline of ecology, which requires hundreds of hours of observation and data collection in the field. Shortly after its rise in the 1970s with the awareness of the effects of manmade environmental pollutants, it began to lose ground in university biology departments as the boom in biotechnology and changes in patenting and technology transfer laws made genetics the hub of revenue streams in research.

It is significant that Ballengée's work has developed through working partnerships with scientists and scientific institutions, and that the field he entered without the conventional credentials obviously takes him seriously.[7] It is also significant that he is not a professional scientist and has contributed something different than what that vocation is structured to include, namely the visual, symbolic and communication skills of an artist. Consistent to another tradition of artists, one that may not be favored in "the marketplace of ideas," Ballengée creates and renegociates socially relevant notions of value. The model he offers us is one of self-motivated acquisition of knowledge, committed to values that

market-driven science has increasingly abandoned. This in itself is political.

It's astonishing to observe how resistance to something called the political has been so well accomplished in a democratic society. Because democracy, the concept and structure which ostensibly does legitimate our government's power over our lives (and deaths), is not a democracy if the people in it are allergic to all forms of political life. In the sciences – and in the US at least, even in the social sciences – to be perceived as having a politics is to suggest that you cannot step easily from yourself to the objective position of the scientist and back again, a move which is apparently the basis for the field's credibility. In the arts –where expectations for the most part have not included responsible decision-making – being passionate, personal and opinionated are assets, but being political is considered the end of creativity. It is having an opinion that might be collective, that might not be individual, that might not be private, and that might not be free. Because like all values in our particular liberal democracy freedom is understood as private, and one of the jobs of the artist is to perform freedom –but altogether too much in the terms by which our society is most conditioned to recognize it.

As artists we can start formulating the unrecognizable, first by refusing to perform a freedom increasingly defined by conditions that legitimate primacy of the private, private expression, private feelings, private experiments, private intellectual property, private losses, private giving, private destinies. Especially as it becomes undeniable that such a "private" guarantee of freedom is rank privilege accorded to fewer and fewer people, those who already enjoy the lion's share of security and aesthetic enhancement. In the overweening neoliberal psychology of public life, the rhetoric of privatization has falsely pitted the liberty and the functional

diversity of individuals against all forms of collective endeavor. If the artist aims to make an impact on the use of science and related biotechnologies to concentrate resources in the hands of a very few, she must refigure both scientific and artistic practice.

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[1] Christopher Dickey, "I Love My Glow Bunny," Wired 9.04 (April 2004).

[2] See http://www.ekac.org/gfpbunny.html

[3] See http://www.critical-art.net/. For more information on this case, see http://www.caedefensefund.org/.

[4] For an excellent overview of the influence of corporations on universities, see Jennifer Washburn, *University Inc.: The Corporate Corruption of Higher Education* (New York: Basic Books, 2005).

[5] For a continually updated source on the details of bilateral trade
agreements being negotiated far from the public spotlight see www.bilaterals.org.

[6] See http://www.greenmuseum.org/content/artist_index/artist_id-19.html.

[7] Ballengée has contributed specimens to the collections of the American Natural History Museum, The New York State Museum, and the Peabody Museum at Yale University, the Museum of Vertebrate Zoology at U.C. Berkeley. He has collaborated with Dr. James Barron, Ohio University Lancaster, and Dr. Stanley Sessions, Hartwick College, researchers at the Natural History Museum in London, Woods Hole Oceanographic

Institution, and many others. In 2001, he was nominated for membership into Sigma Xi, the Scientific Research Society.