

THE FUTURE OF ART ON THE INTERNET

USING A GENETIC METAPHOR

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The challenge of the unready and the unforeseen. The omnipresence of technology dares artists to find their voices using new media.

While there is plenty of discussion about ease of artwork distribution, the reproduction of existent art in 256 colors and the economic implications of digital copyright, the crucial question remains the nature of art.

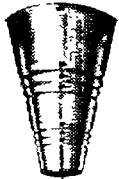
As a practicing artist and interested spectator of biology, I've found the metaphor of artistic development as a genetic development intriguing and practical. Often, a change in our angle of thought allows us to capitalize on the unexpected.

Art, like all other human activities will develop by trial, error, and inexorable serendipity independent of analysis. Yet reflection in situ offers an orienting chronicle of our hopes and fears. The questions raised by this paper are equivalent to the inscriptions of ancient cartographers who wrote, "Here be monsters" on the seductive blank spaces bordering their known world.

Facing a new technology can be disorienting for artists who have the habit of entrenching themselves in a medium to perfect it. Role models for approaching new technology include Marcel Duchamp and Andy Warhol. Along with the Bauhaus movement aligned towards the machine, Duchamp appropriated the ready-made and Warhol, the commercialized mass production of objects. They responded to the technology of production by kidnapping it and calling it art. Following their appropriating precedent, artists can sleep well, to paraphrase Duchamp: as artists, we define art.

Nam June Paik has also pioneered efforts to synthesize artistic and technological creativity. By presuming an interaction between viewer and work, he has highlighted the importance of interactively for the artist and audience alike. His optimistic view of technology tames the specter of machines to a friendly means of expression for everyone. New media requires a unique process of constant learning the latest developments and forgetting the obsolete. Everyday, artists exploring with technology glean anew what is useful to their work from past, present and future alike.

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The metaphor of biological development for artistic development interests us on two levels: the first, recontextualizing the history of art, and the second, a different level, extrapolating the Internet as an organism. In conclusion we use this metaphor as a method to help us understand the topography of the present.

I. A Biological Metaphor for Art History

The activity of the world's artists can be compared with the activity of human genes. The development of aesthetics (ideals of beauty and interest) can be understood as localized specialization. Creative ideas can be thought of as mutations: constant, random, and essential for survival. Even genetic algorithms can be employed to analyze artistic processes.

"Localized specialization", as explained by Stephen Jay Gould in his book *Ever Since Darwin*, is the original term Darwin used to describe his theory of "descent with modification" (meaning progeny with adaptations). Darwin never accepted the theory of Social Darwinism (which coined the popular term and understanding of "evolution"), and insisted upon his theory of "descent with modification", which implies not an ascent from cellular simplicity towards a complex, super-organism, but an across-the-board genetic jerry-rigging for tactical survival, (jerry-rigging is a familiar concept for artists of new media).

As suggested by Darwin's genetic theory, localization is key to the development of dominance. An example is the unique, high incidence of porphyria in South Africa. This disease is thought to have driven King George III of England to madness and is possibly the root of the werewolf legend. According to Steve Jones in *The Language of the Genes*, "Porphyria is rare in Europe, but thirty thousand Afrikaners carry it. In Johannesburg, there are more carriers than in the whole of Holland. All descend from a single member of the small founding population which grew in numbers to produce today's Afrikaners."⁽²⁾ Another illustration is Queen Victoria's descendants afflicted with hemophilia, which was inbred into European royalty. These are results of limiting the chromosomal variability in a population.

Such genetic localization is analogous to art on a local level. For all the diversity within a community, there usually emerges a gradual dominance of an artistic consensus defining a distinct style. Examples are: Florence in the 15th century Renaissance, Paris during the Impressionist movement, Vienna at the turn of the century, Berlin in the 1920's, and New York Abstract Expressionists from the 1940's to the 50's. An urban phenomenon, a concentration of working artists, a dominant aesthetic emerges.

Art historians spend a lot of time tracing these influences of individual artists and communities of artists as well as the impact of entire meetings of cultures. With this scholarship, an artistic family tree can look surprisingly similar to a tree traced by biological anthropologists who study both genetic and cultural influences. Artistic influences, so multiple and fragmen-

tary, mirror the complexity of chromosomal possibilities with an initial isolation necessary to develop uniqueness and the inexorable scattering revealing and creating diversity.

II. The Organism Internet

Employing the metaphor on another level, we assay the idea of the Internet as a biological organism. For its users, the development of Internet accelerates the redefinition of "local". Historically, aesthetic has been a local phenomenon—a cultural consensus and specialization of individuals—an extract of artistic agreement. With the Internet, the sheer speed of dissemination will affect how aesthetic consensus is reached. While many art historians remain interested in the connoisseurship of the individual hand of an artist (the "signature brush stroke" of Raphael for example), now more and more delve into cultural signifiers—art iconography—that is imbedded in the work of art or vice versa, i.e. the social context of an artist's work. Is a particular work of art a comment on a particular time or just a vehicle for that time? On the Internet, the artist's social context is redefined to include whomever he/she collaborates with, irrespective of geographic location.

The major danger associated with globalized, standardized systems is over-homogenization. A good example is found in the history of agricultural genetic engineering. Sophisticated breeding and cloning of grains and vegetables optimizing for marketable traits has developed into a loss of genetic diversity. Many farms and even entire countries use genetic clones for maximizing agricultural production. As described by Jones⁽³⁾, a crisis for American grain farmers in the 1970's occurred when a sixth of the grain crop was destroyed by a virulent fungus. Because all the grain was of a single type, they shared a singular lack of resistance. After a frantic search, the farmers found a more ancient species of grain to breed a more resistant plant. As a result, there are now seed banks around the world to protect agricultural genetic diversity.

Being wary of homogenization, artists need to differentiate between the preservation of a unity of artistic ideals and the conservation of the environment of diversity. In the present day, artistic ideas are moving in synchronism with the rest of the world, changing so quickly that no aesthetic can dominate for very long. Instead of a traditional model in which an artistic movement grows out of a local community and reaches ascendancy by which others are judged, the acceleration of information transfer offered by the Internet can lead to a weakening diffusion and confusion of taste. The result could be a homogenous blandness, (American television, dubbed into many languages, is an example of global homogeneity in a creative form).

The solution is to recognize the necessity of diversity for ensuring artistic well-being. Comparing off-line and on-line art will reveal much about the personal meaning, apart from the media hype, that people find in this media. What will artists on the Internet look for: communicating without meeting people?

anonymous art? game art? Their mutual influence is already felt in many multi-media exhibits. In any form, once an artist presents his/her work to the public (fairly easy on the Internet), it is placed in context, judged by what had been created before, and influences the criteria for what comes after.

The Internet also offers a re-evaluation of the place of the individual. Biologists have argued that genes are purely interested in perpetuating more genes, thus the entire theory of survival of the fittest, genetic success, etc.. From this viewpoint, the organism itself is nearly inconsequential except as a risky chromosomal repository. Yet genes survive for individuals success (i.e. living long enough to reproduce), and cannot look into the future to predict and adjust to environments that do not yet exist. All evolution, genetic and artistic, is fortuitous, without master plan. Artists working through the Internet have a chance to work and create on a communal level, much as ants in a hive or bees in a colony. One example is JOE BLOW, whose "World's Longest Sentence" invited anyone on the Internet to contribute (as long as they didn't place a period) to the piece exhibited in a Soho gallery. The "World's Longest Sentence" introduces a new form of art, on a new scale of diffusion of creation, that sublimates the individual contributions to a collective work.

Another crucial way to preserve heterogeneity besides diversification is mutation. The key to artistic as well as genetic success lies in such accidents. For laymen, the word mutation conjures visions of arthritic, oversized lizards eating Tokyo. But this is really an artistic rather than scientific view. Genetically speaking, mutations are minute, constant, potentially lethal and yet essential for survival. The majority of mutations have no discernible effect whatsoever, occurring as natural errors in DNA replication. Some of these copying mistakes have a great impact on the success (i.e. local environmental adaptability) of the organism. Artistically speaking, creativity is mutation, modifying old ideas, objects, techniques and forms. To continue the analogy: development is random, improvement is relative, and success is based on the environment. Major concepts inherent in mutation theory are the primacy of chance and the expediency of existence-ideas also important to struggling artists everywhere.

Thus, considering so many variables when we discuss the future of art on the Internet, we can only consider the structure of digital transfer, not the variability and potential in individual artists. The potential remains in the individual. We won't want to follow the precedent of poor Dr. Frankenstein who is now confused with his creation.

III. Using the Metaphor

Advances in technology have exploded the number of our indirect experiences. After the evening news we say that we "saw" the event, but in our living rooms we are far too detached to claim actual experience. We communicate through telephone,

fax, Internet. All is by proxy. We more and more rarely communicate directly and internally, with the multiplicity and chance of the shared moment.

Ironically, virtual reality has fully arrived for the individual, not for the environment, in that it has become easier than ever to fabricate our own persona in relationships, personal and professional. In relationships by E-mail we are never betrayed by the subtleties of tone of voice, expression, gesture, timing, appearance, touch or smell. We always get to finish what we say, and every interaction is self-edited. Yet these can be poisoned gifts. The reality is that we are increasingly alone in front of our terminals. We experience disengaged from the sources, which connotes a dependence and trust on people several informational generations removed from us: the few people actually experiencing, the translators into disseminating media and the digital catalogers and structuralists. The facility of these types of relationships will also affect artists.

A promise inherent in the Internet is the potential that art will be perceived more and more as its own medium, complete in development of process and interaction rather than as an elaborate obsession of objects. While modern art has been freed from representation of the physical world, it has curiously remained tied to physical existence. Acorporeality offers an alternative from the dogma of art for museums and the concept of the history of art and the lives of artists existing merely to produce objects with market value. Art has been chained for too long to the idea of production.

But like currency, which has become a phantom idea long untethered from any basis in reality (i.e. the gold standard), and yet remains an obsession in our society, now, art has its chance to flourish as the conjectural.

Art is most interesting when it has a profound connection between its medium and its content. It is a better idea to explore time-based art (consuming, using, and conscious of time), rather than painting clocks. In that sense, what kind of art will be comfortable on the net? Probably one that capitalizes on the nature of the net. The scale between individual and forum will change. No longer limited to the number of visitors to a museum, or other traditional temporal and geographical constraints (the criteria will be the ownership of computers and modems), the impact of individual contribution will be recalibrated in direct proportion to the number of people contributing. Conceivably, more contributions, less individual impact.

By viewing art on the Internet as a gigantic network, as wondrous, varied and uncontrollable as genetic activity, it can be seen as a global cadavre exquis (invented by the Surrealists, one artist would begin drawing a fantastical animal and fold over the paper, hiding all but the incomplete lines for the next artist, who would continue drawing the animal without seeing what was drawn before, etc.. The animal finally revealed from

head to foot was surely surreal). Digital art on the worldwide scale can also be seen as a conglomerate of minute individual contributions, too numerous for any individual to know all (The connecting lines will be software constraints and the strength of precedent).

Professor David E. Goldberg, Director at the Illinois Genetic Algorithms Laboratory (IlliGAL) unwittingly provides an idea for artists on their home web page by describing genetic algorithms as using equations and programmed procedures to mimic environmental selection on variables generated by computer from artistic ideas. Thus the artist retains specificity of process while inviting chance operations done by the computer to guide the results.

The accessibility of the Internet will allow artists to select and recombine ideas in this way from many diverse sources. It will also advance non-linear learning and expression, advancing a democracy of collage, possibly redefining the hunting and gathering of information from a process to the goal. This non-linear pattern (explained as the concept of chance by John Cage and Merce Cunningham), represents our true daily experience of visual and sound "bytes". The popular use of "byte" taken from computer terminology, now applied to the torrent of information we marinate in, highlights a change in our way of seeing equal to the revolution of photography's arrest of the instant. As we channel surf in homes or surf on the Internet (switching rapidly from place to place, we prove that we are all experts in non-linear systems. We are connoisseurs of chaos.

With this new medium, I imagine art as global as weather patterns. A cadavre exquis beyond belief. Aesthetics will be as untraceable and unenforceable as the source of thunderstorms. A visual map of global artistic activity will resemble satellite footage of the world's meteorological activity. Art critics will function as weathermen. The content of art will be its medium (a fascinating paradox). Weather art.

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*Many thanks to: Christophe Malbrel, Diane Rosenblatt,
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References

- (1) Gould, Stephen Jay. *Ever Since Darwin*. Norton Paperback. 1977. p. 34-45
- (2) Jones, Steve. *The Language of the Genes*. Harpers Collins Publishers 1993. p. 150
- (3) *Ibid.* p. 267