ART & TECHNOLOGY

References
— Popper, Frank, Art of the Electronic Age, New York, Thames and Hudson, 1993

Quotes
"Computers in the Future will weight no more than 1.5 tons" — Popular Mechanics 1949
"If I paint this way, it’s because I want to be a machine" — Any Warhol
"Art that is real is art that serves" — Amalia Mesa Bains 1994
"Only the Paranoid Survive" — President of Intel 1996
"The purpose of art is to distract us from mass suicide" — Jaron Linear 1997
"In 0.0042 seconds, the entire works of William Shakespeare translated into 200 languages sent from New York to Omaha, Nebraska, without skipping a verse" — Advertisement for Qwest, USA Today, April 8, 1998

Art
— fundamentally an exchange of ideas, creative expression
— historically done with traditional media, painting & sculpture
— today artists are using technology to redefine what art is and to explore who we are, at this time
— being in silicon valley is like being in Florence during the renaissance.
— transformed the art world, postmodernism
— Industrial Rev/ Information Rev
— Artist is Cultural Worker. Contemporary artists today:
— identify relationships to the world both as individual and participants of a large social structure
— initiate critical public dialog= engage, translate, and define the issues facing us
— reveal contradictions, force people to “re-see” what they think they have already seen
— Process & Product

Technology
Technology is a tool
Technology has fueled art and innovation
1440 Gutenburg Removable type and press
1532 Durers mechanical looking grid (to aid in drawing)
1540 Copperplate Engraving
1780 Lithography
1839 Photography
1980’s Digital imaging

The Renaissance
Renaissance Art integrated with new sciences including anatomy, perspective, mathematics, and chromatology.
Their goal was to reach heightened beauty and harmony as an embodiment of universal meaning and supreme inner truth.
Art reflected and intense interest in the tools of knowledge, ways that make it possible to observe nature more accurately.
Solutions for organizing visual information included perspective (mathematically constructed vanishing points), and proportion.
The visible experience of nature could be stabilized in rendered form.
Modernism 1860-1960

The Machine Age
The modern period began when technological change speeded up to the point where succeeding generations could no longer feel certain that they lived in the same world. Modernism refers to a diverse historical period which evolved in the conditions and context of the Machine Age. New forms of representation such as photography and cinematography contributed to a new consciousness and to more modern ways of seeing which reflected the idealisms of a faith in progress through technological progress.

— Courbet and Manet

rejected the depiction of historical events in favor of portraying contemporary life.
made people more aware of the tensions and possibilities within themselves and the age they live in.
their work was not without controversy.
— this new avant-garde, Impressionism, rejected academic standards and traditional patronage.
— Modern Art = radically new attitude toward both the past and the present
— since impressionism art has proven its necessity by charting social, political, and philosophical currents.
— photography allowed painting to free itself

Photography
“From today, painting is dead”,
— Paul Delaroche, critic, 1839, upon the announcement of the invention of the daguerreotype

Photography undermined the existing function of art.
Photography threatened the “aura” and the value of the original.
Photographic reproduction and the cinema raised social questions about the artist’s role, about the audience for art, about art as communication rather than art as object, and thus brought into focus the social function of art.
Because of the threat to the art object and the issues it raised in its association with Machine Age copying processes, photography’s full development as a medium for art and its acceptance as a viable fine art form were suppressed until the beginning of the postmodern period.

Two Early Directions of Modernism

1. Modern Avant-Garde reactions to the Machine Age
DaDaists and Surrealists used machine parts and photomontage to comment on the alienating influence of industrialization and the commercialization of mainstream art.
Anti-art tactics like photomontage was a way of outraging the public and destroying the aura or market value of the artists work by revealing it was appropriated reproductions.
Constructionists and Futurists extolled the aesthetics of photographic reproduction, seeing hope in the machine art for a new kind of culture. They combined technology and art in the hope of building a new social order in revolutionary Russia.
The Bauhaus, 1919, used machines to manufacture their work while creating an aesthetic of pure form.
Moholy-Nagy embraced photography as a “new vision” to reshape individual consciousness and a way of seeing society from a different perspective. A tireless technical innovator, painter, thinker, and writer. He predicted that light would be an entirely new medium.

2. Abstract Formalism
focus on the solution of formal aesthetic problems

PostModernism 1960-present
Postmodernism is a rejection of Modernism.
— Influenced by mass culture and expresses ideologies that embody inclusively (feminism)
— It embraces diversity, community, new cultural forms

Pop Art (late 50’s, early 60’s)
Pop art, reaction against abstract expressionism and a new acceptance of mass culture.
Pop artists began appropriating mass culture using photography and mechanical reproduction.
Warhol’s mechanically screenprinted photographic images directly into the field of painting.
Pop Art and the evolving “information society” under development marks the moment of a major crisis for representation.
Conceptual Art (mid 60’s)
— ideas, rather than object is paramount, reacted against the commercial art world

Feminist Art Movement (late 60’s)
— sought to “de-gender” art
— questioned the cult of “genius” and “greatness”
— validate non-high art forms such as craft, video and performance

Computer Art
not a defined movement
— art and technology
— digital media
— new media

Computer graphics
1965-75= dominated by computer scientist with easy access to equipment. Art world rejected computer art based on aesthetic qualities of computer graphics created by mathematicians, programmers, scientists mislabeled as artists. They had no artistic pretensions, nor did they seek to be labeled artists
1960= multimedia projects= slide shows
1970= center for experimental television CETV KQED
1984= friendly user interface, revolution

Art movements at the end of the 60’s and early 70’s focussed on art as idea and art as action. Art becomes “dematerialized,” as expressed through energy and time-motion concepts. The idea of any pure form is challenged.

Electronic Media
Computers and artists are revealing fertile ground for expression and discovery. Artworld is slow to take new media as legitimate. Surprising because electronic culture is the big, actual and an emerging energy.
1. context is difficult to interpret
2. isn’t sellable, isn’t always tangible
3. still associated with engineers and programmers (collaborators)
4. venues are trade shows, special interest groups (bells and whistles)

Shattered the very paradigm of cognition and representation since the renaissance. Objectivity and fixed meaning were being attacked by Structuralists and Post-Structuralists. The world began to be seen as an experience of continually changing sequences, juxtapositions, and layering, a decentered structure of associations. The media itself defies objecthood.

Three Museum Exhibitions
1969 “The Machine as Seen at the End of the Mechanical Age Exhibition”, MOMA
E.A.T (Experiments in Art and Technology) arranged a competition for collaborations between engineers and artists.
1970 “Information”, MOMA
Art only exists conceptually and as such is “pure information”. Exhibition was part of the avant-garde movement of the sixties and seventies which move toward a dematerialized view of art that refused the object.
1989 “ImageWorld”, Whitney Museum of Art,
Explored the circulation of images and influence form popular culture that had taken place.
Video
A time/space medium was a powerful new form of representation, expanding to include multimedia and the interactive capabilities of the computer.
The digital simulation capabilities of the computer create a break with the paradigm of representation we have followed since the Renaissance. Images no longer reside in the visual field but in the database of the computer. The image is a information structure which has no physical presence in the real world.
It not only has dematerialized the image, but also changes the participants relationship to the work who participates in the work’s ultimate unfolding and meaning.

During the past two centuries, to be a self is to be under relentless pressure to catch up.

Contemporary artists using Digital Media
Bruce Nauman, Bill Viola, Lynn Hershmann, Jenny Holzer, Nam Jun Paik, Bruce Nauman, Tony Oursler, Alan Rath, Bill Viola, Laurie Anderson, Rachel Rosenthal

Sharon Daniel (MIT, UCSC)
“brain opera”, 50 collaborators, participants contribute to database, pitch of voice= more pleasant sound & visuals

Natalie Jaremienko (Bureau of Inverse Technology)
“Live Wire”, movement based on data transfer
“Voice Box”, 3d sounds record and play, becomes and entity, 100 in a room
“Sperm Economy”, large bank of sperm, ethnic origin by %, physical attributes, medical info, marketing, insurance
“Suicide Box”, video triggered to record suicides on bridge, mapped to Dow Jones industrial average

Ken Goldberg
“Planting a garden over the web”, “moving shadows over the web”

Cultural Studies probing issues of Art and Technology (representation and mass media)
Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction”, 1936, assesses the pivotal roll played by photographic technologies, (first as a catalyst, than as instrument of change) in twentieth century art

Walter Benjamin, “The Author as Producer”, 19??, Benjamin anticipated the current crisis of identity, and the loss of moral authority of the author/artist. Benjamin understood the potentially positive influence of technology on art and on culture, he was also aware of the major losses created by what he called the loss of “aura,” that sense of uniqueness that attaches to a singular work of art and that is lost in reproduction.

Baudrillard on simulacra, simulation, and the hypereal
Barthes and Foucault on intertextuality and interactivity
Derrida and the feminist movement on deconstruction.

Margot Lovejoy on Representation
“Representation refers to the system of iconography which contains both the perceptual and aesthetic when related to art and has conventions of both tool and medium inscribed in it. At different moments of history, it changes relative to a paradigm which contains within it the unified framing of agreed upon assumptions that shape the understanding of what art is in a particular time period. Images of objects artists construct are not just simple responses to individual experience. They are always ordered, coded, and styled according to conventions which develop out of practice of each medium which fits tools and process, whether the medium is a traditional one such as painting, sculpture, printmaking, photography, or an electric one such as video or computer. Artist vision and artist’s responses to the world are dominated by the conditions and consciousness of a particular time period.”

Interactive Art
Non-linear, meaning is not controlled through linear structure.
requires a better educated, well-informed, demanding public.
solicits from the view not simply a reaction or reception, but an independent construction of meaning.
The view has a position of power in the work which one never had before.
New territory, no traditions, no grammar, no guidelines.
VR
- technological invasion of the body’s senses and a relocation of experience
- Telecommunications
- Surveillance
- Performance where viewers become collaborators

Laurie Anderson- Stories from the Nerve Bible
- asks audience to confront the future and determine whether there is hope for human progress or whether we will sink only more deeply into the violence and social upheaval we are experiencing at the end of this millennium.
- she understands the paradox technology represents— that it can be the agency both for terrible spiritual and social loss and for enormous social and cultural gain
- “One World, One Operating System” bright images of Persian Gulf bombing looks like a video game. She reminds us that behind those polished media images, people are dying.

The Future
All art makes a comment on the ideology of everyday life.
It is the nature of art to speak of the moment.
Definitions of art alter with historical and technological change.
So does our perspective about its role and form.
Representation will continue to change.
Representation is a complex system which refers to important aspects of art practice.
Representation encompasses all forms symbolic manifestations whether real, imagined or reproduced.
Representation changes at different moments of history.
Since the Enlightenment the following questions have dominated art discourse:
- What is the function of art?
- What is useful and significant to look at?
- Who has authority and who are the most important artists?
These presume the stability of the work of the artist; the position of the observer; the integrity of the subject and the author. That was all assumed within modernism. That changed with postmodernism.
With digital technology we no longer have a spatial point perspective.
Reality can now be paralleled by a completely simulated (virtual one).
Digitization has destroyed the faith in the truthfulness of representation.
Any work is incomplete without the viewer taking action.

Intrinsic Qualities
1. encourages new forms of expression
2. incredible production tool
3. encourages collaboration
4. Authorship & distribution capabilities

Encourages new forms of Expression
- virtual worlds, new media, telepresence— terrains that challenge representation and signification
- blurs distinction between news, entertainment, propaganda
- dissolving boundaries to create new forms
- encourages creativity= folk art

Diverse production tool
- Digital media is not a single palette, mode or essence, but the ability to pull from and be influenced by all media, be it virtual or real
- Swiss army knife (paint, photograph, sculpt, words)
- Allows making more complex images with more efficient production processes.
- Simulation- texture, physicality, print on canvas
- new generations will break this role of emulating traditional media
- wonderful mistakes happen
Collaboration
— encourages cross disciplinary expression (IDEA lab)
— cross cultural expression= your idea and my idea make a third living thing
— links information and art together (tool with unlimited agendas without the brain power)

Authorship & Distribution
— everyone has something to say
— www, cd-rom, just the beginning

The Critique of Art
— Computer art is going through a recognition process of critical analysis by viewers, artists, and critics.
  Organizations — Leonardo, ISEA, YLEM
  Education — CADRE, ACCAD, IEAR, IDEA
  Venues — Blasthouse, RGB, COMA
  Events — Digital Be-in, Cosmosis art, music, underground culture
— The value should not reside in the tools alone
  but how they enhance the creative process
  and how the product of the process informs existence.
— Razz matazz is empty style. Ideas have soul.

Technology based art is a natural.
Possibilities for artistic discovery is irresistible.
It’s easy to be a pioneer in a time where experimentation is welcomed, encouraged and rewarded.

WHAT IF?
Technology
— We seem to love technology. Love is good, and often blind. The Technology ramp can be dangerous for society and existence.

Good
— opening new territories for sharing ideas
— opening new ways of expression
— new ways of thinking, virtual worlds
  (in music, traditional notes exist as marks only as guides, digital notes are mandatory code)
— unrestricted community

Bad
— we build technological weapons systems because we can
  (was the Gulf War was an exercise in trying out our new technology?)
— pluralist domination could overpower the expansion cultural exchange
  (where Columbus brought new culture he also brought disease and forced religion on isolated societies)
— we are experiencing a blurring of the distinction between news, opinion, entertainment and propaganda
— information overload= paralysis of analysis