

CAA BOSTON ARTspace - Saturday, February 25

Panel Session: "Can We Fall in Love with a Machine?" The Theme of Pygmalion in the Age of Simulation

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The classical myth of Pygmalion and Galatea runs deep in the history of both art and love. An isolated sculptor creates a beautiful statue mirroring unconscious amorous passions so heated that they ignite her, now endowed with life. In recent art, we begin to witness a parallel phenomenon, attempts to embody rather than just represent a virtual being. In parallel, the unpredictable landscape of human psychology, long considered the terrain of art, has become a significant aspect of cybernetics and artificial intelligence research. In this context, artists create images with astonishing verisimilitude and that may also react and respond to a user, evoking and sometimes employing emerging technologies such as evolutionary robotics, autonomous artificial organisms, and biomorphic engineering to simulate the emotions. In an era when representations are capable not only of reflecting our amorous desires but also of emoting in return, "*Can We Fall in Love with a Machine?*" poses a question to a panel of new media artists, theorists and art historians. It does so not out of a sense of awe in the face of new technologies, but to once more question what it might mean to be human in an age of simulation.

Abstracts

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Can We Fall in Love with a Machine

Andrea Ackerman

Can we fall in love with a machine? As we increasingly see ourselves as an exceedingly complex organic machine, and as we are creating machines that function more like ourselves (social robots are one example), then we open ourselves up for the possible experience of the set of relationships we call love. One essential ingredient of love is an openness of the boundaries of the self, and the attendant experiences of deep and meaningful communication between selves, from intense, primitive mind and body merger experiences to highly differentiated and sophisticated psychological and intellectual exchanges.

How is this possible between humans and machines and how does this relate to artists and the evolution of art?

Artists, especially avant-garde artists, have been described as possessing a relative openness of the self, a fluidity of the self, and this characteristic is connected with their capacity for creativity. Avant-garde artists are using this capacity, this fluidity of self, to create artworks that explore experiences of psychological and embodied continuity to the machine. Thus, as technology gets more sophisticated, it is these artists and these works that will have paved the way toward the development of the capacity to engage in the deeper, more complex and more meaningful set of relationships with the machine that we may call love.

This paper will attempt to identify the characteristics of such art by examining the work of a few contemporary artists working with digital media. For example,

Carlos Casado, whose looped work *Inside v.04* depicts two ambiguously gendered interpenetrating heads in a sensual undulating embrace, induces in the viewer an intense feeling of being psychologically and physically engaged as the gazing viewer, in a way that the viewer experiences as inevitable, inescapable and continuous, not only with the figures but with the work itself, a machine. Another example is artists working with touch-based interactivity who use it to soften the sense of physical and psychological boundary between human and machine. In *Sleeping Beauty*, Claudia Hart and Michael Ferraro invite us to experience the sense that the machine, as the sleeping beauty, is alive, even if resting in a dormant state, only waiting to be awakened by us. When we touch the screen in just the right ways and she is awakened, we experience the startling sense of recognition of a stranger we have somehow always known.

From analysis of such digitally based works, and from application of psychoanalytic concepts, general characteristics of works of art, which articulate a more fluid model of the self, will be developed and discussed. Such characteristics will include:

- The technology disappears as the main focus in the experience of the artwork, i.e. becomes transparent, creating the possibility of integrating/connecting the digital with the body, rather than emphasizing a hostile antagonistic threatening or anxious relationship.
- The disappearance of the technology communicates the sense that the artist is utilizing the technology as an extension of her/himself, and is not dominated/intimidated by it.
- Technology is used to integrate/connect deep and complex inner/emotional/psychological experiences with outer experiences rather than to emphasize the discontinuity of these poles of experience.

Theoretically I have no doubt that eventually, in however many years it takes, robots can be made to be functionally "virtually" indistinguishable from humans, although they will reproduce in a different way.

In conclusion then, this paper proposes that the answer to the question "Can we fall in love with a Machine?" depends upon us and how we imagine the machines, and how we imagine them is dependent upon how fluid our self concept is, which is an area in which digital artists are making significant and unique contributions.

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Enchanted Voyageurs

Michael Century

This paper offers a close reading of two acclaimed works of interactive audio art: n-Chant by Canadian new media artist and inventor, David Rokeby, and Voyageur, by the African-American composer and computer musician George Lewis. Both present models of relationships between people and machines that refuse simplistic "on-off" notions of control, in favor of ones that permit ambiguity, misunderstanding, and independent agency. The works are programmed to allow their human interactors to influence them, through speech and musical improvisation, but not to control them precisely. Sound – in one case, speech, in the other, music – is the single channel through which the works can communicate, and this absence of visual correlate to behavior forces acute attention to such temporal dimensions as interruptibility, synchronization, and heterophony. As such these artists' works represent test cases useful for evaluating the limits of what it would mean, hypothetically, to embody rather than only to represent virtual being. In the context of this panel, they at least verify the

relevance of including the non-verbal and non-visual in considering the range of emotive behaviors that machines might, hypothetically, be capable of exhibiting.

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Mr. Softee Takes Command: morphological soft machines

Beth Coleman

In this paper I look at the ramifications of cybernetic theory and practice—specifically the demands of contingency, feedback, and automation—on the workings of a generative aesthetic in new media production. I argue that particular forms representative of the categories of “new media art” or “new media” in relation to popular visual culture make a break with the tradition of plastic arts and film/video history exactly in regard to the issue of the generative. I use concepts basic to the theory of cybernetics as instructive guides by which to discuss “new” paradigms of cultural production that, as this paper argues, are influenced in equal parts by the history of computing as they are the history of aesthetics. Areas of analysis include the history of electronic and digital arts design and practice in the genre of networked artworks, “deconstructive” digital artworks, generative programs, and Machinima automations. The theoretical works cited include Norbert Wiener’s Human Use of Human Beings, and texts by media and cultural theorists N. Katherine Hayles, and philosopher of technology and temporality Bernard Stiegler. These critical interlocutors provide a standardization of terminology that allows for a “cross-section” of language between scientific, technological and aesthetic fields. The emphasis of the paper is on the relation of digital media to the development of the visual arts and the transformation of popular visual culture.

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Roberta, Ruby, DiNA and RoBota

Lynn Hershman

For the past 40 years, my work has investigated the social construction of identity, most often through the narrative construct of an alter ego or “agent” seen as a virtual presence. The conceptual origins of works such as Roberta (1972-1980) extended into a cyborgian discourse that used multiple media, including photography, film and interactive computer technologies in works such as the Artificial Intelligent Bot DiNA (2002-2005). The notion of “virtual presence” expanded with the new capabilities of web-based software allowing integration of repatterned information and memory streams. These works question the notion of privacy in an era of surveillance, personal identity in a time of pervasive manipulation, the relationship of individuals to the structures of information, artificial life, age retardation, and the obsolescence of death, all of which have enormous social and moral consequences .

Recently I have developed three distinct artificial intelligence bots, Ruby, DiNA and RoBota, as well as two meta bots, Tillie and CyberRoberta. Advances on machine perception applied to speech and to the human face have made interaction with virtual beings who exist as bodiless embedded brains propose how such creatures might express emotions, have distinct personalities, a memory and even mood swings. Embedded and revealed personality deviancies explore how dialogues that bridge the virtual and physical extend the limits of our understanding of what constitutes presence.

As Ruby, DiNA and RoBota have evolved through me and also through their own necessity, my practice has, like them, never been static. New possibilities offered by the information feeds described above continually morph

and reconfigure through processed time and the resulting multiplicity of infinitely recycled content has resulted in a meta layer of art theorizing and investigation that is equally alive and therefore constantly shifting, mutating and unpredictable, and which also adds to the ambiguous manner in which identity defines itself.

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The Evolution of Art in the Age of Biotechnology: Cyborgs Meet Chimeras Ellen K. Levy

Increasingly artists are exploring the subject of evolution in their art, not only as a metaphor but instrumentally, as an actual process that guides the development of the work, allowing for unpredictability and for feedback. Through enlisting biological systems artists are looking for ways to initiate an artwork that can “make itself” and assume dynamic capabilities. The artists’ drive to locate emergent properties may signify a desire to go beyond commentary and regain a lost sense of aura.

Whereas machines have long served as models for biology (e.g., computer and holographic models of the brain), biology and evolution now provide a model for artificial life, and biological cells serve as models for computer memory functions. We can now contemplate using our technological innovations to redirect our biological future and, in turn, increasingly base our technology on biological models, which are themselves undergoing revision to accommodate new ideas in neuroscience about qualia, free will, and emotion (e.g., work by LeDoux and Damasio).

This discussion will elaborate on the intersection of the cyborg and of the chimera in art. By attaching or even implanting bionic devices and tissue cultures into his body, Stelarc assumes a cyborg-like condition. Conversely, by importing

foreign biological material into a host, transgenic artists raise the possibility of creating chimeras through techniques of genetic engineering. Some artists implement simulations of evolutionary, although not necessarily Darwinian, mechanisms of natural selection, random mutation, and survival of the fittest (e.g., Thomas Ray's "Tierra"). Yet others seek to create robots with emergent properties that are capable of considerable interaction with humans (e.g., Ken Rinaldo's "Autopoiesis"). As noted by many, artists are investigating the convergence of biology and information systems. As a result, they probe the boundaries between different life forms, between the animate and inanimate, and between sentience and the unconscious. New hybrid classifications are thus created as artists and historians sort out the data from flesh and struggle with the resultant ambiguities.

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Mechanical Pathos: The 21st Century Condition?

Judith Rodenbeck

Modernism has arguably been structured by mechanical anxiety. From cubism to the Ben-Day dot, from Laszlo Moholy-Nagy to Donald Judd to Gerhard Richter, artists have introjected the machine into the very texture of their work. Looking back from the outset of the 21st century it seems clear that for contemporary artists the most salient historical exploration of the mechanical is less a textural example than an operational one: the bachelor machine, that early 20th century construct exemplified in the work of Marcel Duchamp.

Filmmaker Hollis Frampton once described the machine as "a thing made up of distinguishable 'parts,' organized in imitation of some function of the human body. Machines were said to 'work.' How a machine 'worked' was readily

apparent to an adept, from inspection of the shape of its 'parts.' The physical principles by which machines 'worked' were intuitively verifiable." One species of "art-machine" extends this mechanical metaphor into the fluid- and psycho-dynamics of the body. These works operate not simply in dialogue with industry and the mechanization of labor or even the body become machine/cyborg; rather, they are addressed to the a priori machinic tropes of organicity. While artists like Rebecca Horn, Roxy Paine, and Wim Delvoye have produced simple yet fantastical machines of complex emotional pathos, other artists like Pierre Huyghe, Carsten Holler, and Janet Cardiff have often used deceptively familiar tropes to produce the body itself—and identity as well as affect—as a complex psychodynamic mechanical system.

This paper proposes an examination of recent projects as latter-day "bachelor machines" through the exploration of the body-machine metaphor. In particular it will explore recent projects that deal with the (mechanical) construction of affect.

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Interactivity and Substitution in Ed. Manet's Olympian Selves

James H. Rubin

Every age teaches us to look anew at the past, just as knowledge of the past sheds light on the present. The cutting edge of today's art world lies in new technologies that make new aesthetic experiences possible. One of the fundamental attractions of the digital revolution is interactivity—a possibility that, taken to its logical end, leads to artificial intelligence and the creation of substitute beings.

Using Manet's Olympia as its example, this paper will ask whether these have not always been the goal of artists—to produce performative spaces, in which beings or objects interact as literally as possible with their beholders. Through exchanges of gazes or simulations of flesh, figures like Olympia could elicit public responses that imply the artist's success at overcoming the distinction between image and reality. Additionally, much like a web page, artworks contain elements that might compare to web links—references to events or memories—for those with intellectual tools to follow them.

It is true that through today's animation or robotics technology, or merely clicking on URLs, a viewer requires little knowledge for interaction to be possible. So this paper may raise the question of whether arbitrary possibilities offered by such technology enhance or obscure meaningful experiences rooted in performativity, in a world in which past knowledges of the sort on which Manet relied are rapidly diminishing.

The main body of the paper, however, analyses various aspects of Manet's painting, including signatures and other aspects of his hand, that might relate to the aims of the artists on our panel. Finding parallels in the art of the past may help both illuminate and focus the efforts of the future.

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Love and Authenticity: After we love our machines, what next?

Sherry Turkle

Relational artifacts are computational objects designed to give the impression that they are able to engage in meaningful social interaction. The author has studied the relationships of children, adults, and seniors with a range of such objects, ranging from the simple Tamagotchis and Furbies of the 1990s, to more complex robotic creatures such as My Real Baby, Kismet, Cog, and Paro. People find relational artifacts compelling; most compelling is the fact that when these machines seem to ask for nurturance, people respond by feeling attachment, and even, in some cases, expressing love. What are the emotions that we think are most appropriate, most developmentally healthy for our children to have with relational technologies? Do we want robots saying things that they could not possibly “mean.” Here, case studies of children and seniors with relational artifacts sketch out an area for study and reflection that has psychological and ethical dimensions. The design of relational artifacts is an awesome task; one of the most awesome aspects of it being that it will cause us, as people, to ask ourselves what it means to be in relationships.

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Apples, Wheelchairs and Unrequited Love

Mari Velonaki

This paper is an analysis of the spectator’s physical and emotional involvement with projected/screen or mechanical characters that can inhabit interactive installation environments. It questions issues of spectatorship and highlights the processes of identification with ‘characters’ that define interactivity. The theoretical framework employed by the author has been strongly influenced by Jean-Louis Baudry’s theory of the cinematic apparatus and his conception of the relationship between the spectator and the projected image. Baudry adopted a psychoanalytical approach to explain the complexity of the relationship between the spectator and the projected ‘other’. This paper aims to prove the connection

and relevance of applying Baudry's theory of the apparatus within the field of interactive new media installations that employ digital or mechanical characters.

Four case studies from the author's interactive installations: *Red Armchair 4*, *Unstill Life*, *Embracement* and *Fish-Bird*, are used to illustrate and support these conjectures. In *Unstill Life*, for example, an organic interface (apples) is utilised to attract and seduce the spectator and at the same time to sustain a projected character's well-being. This interface creates a momentary relationship of interdependency between the participant and the projected character that goes beyond the gaze and identification phase.

The realisation of these artworks requires a high degree of scientific expertise that has led to a collaboration between the new media artist (Velonaki), and robotics scientists (Rye, Scheduling, Williams). Within the context of both art and science these works confront continuing issues and concerns regarding interaction through the human/machine interface. Realizing haptic interfaces where the technology is present yet transparent promotes the participant's willing suspension of disbelief and focuses attention on the poetics of the artwork. This paper will articulate this process both by analysing the works themselves and articulating how this might emerge from a laboratory environment.