CHAPTER 18
Digital Art—Cyborgs and Post-Humanity


Introduction

For younger artists around the world, video, hi-tech plastic resins and DVD are now as natural as paint and brushes were to earlier generations.

(Charles Green, 2004)

Technology has always shaped and forged perceptions, representations and conceptualisations of the world. This is dramatically evident in the use of digital technology by artists today. The distinction between the virtual (generated by computer) and the real is constantly being blurred. The social critic Marshal McLuhan in the 1960s suggested that technology was having a dramatic impact on the shaping of modern cultures and that artists were ‘the antennas of society’. McLuhan highlighted the importance for artists to experiment with technology to find tangential uses and applications that would, in turn, provide greater social use. Many contemporary artists demonstrate the creative uses of technology and digital media in the visual arts.

Digital technology has had a dramatic effect on the practice of artists as well as on the broader culture context. Artists employ technology to generate new images and to experiment with new aesthetic principles. Examples of this are the use of algorithms to generate images without any realistic reference, and the complexities of scripting and programming to create new worlds known as ‘virtual reality’. With the advent of such artmaking comes a variety of methods of evaluating the contemporary artmaking process. Two important critics, Lev Manovich and William Mitchell, identify the artistic potential of digital media as the key aesthetic agent in the twenty-first century.

Cinema at the turn of the twentieth century demonstrated how the photographic image could be a dynamic form; it became the primary medium to represent the Zeitgeist of modernism. Although the Expressionists and Surrealists used cinema in their practice, the employment of technology became more associated with popular culture. Traditional art practitioners have often scrutinised and dismissed technology’s relationship with the arts as being limited. The development of aesthetic principles relating to the moving image did not occur until well into the mid-twentieth century and visual conventions of interactive technology are only now being developed. This scrutiny of the aesthetic merits of artists’ use of technology such as computer-generated imaging and the Internet highlights the way technology has presented constant challenges and changes in the evolution of the visual arts. Technology is seen not only as a medium but also as a symbol and code, conveying a message of radical change in the artworld.
The pictorial dynamism developed by Futurist cinema, the connectedness of Fluxus videos and the drama conveyed by documentations of performance work are a distinctive legacy for the development of digital art. Central to such work is the consideration of spatio-temporal qualities. Digital technology, both as still images and interactive media, brings into play the language of cinema and the plasticity of the photomontage of modernism. Digital media is an art practice developed in a contemporary artworld and is recognised as the emblematic practice of postmodernity. Digital art is a practice that challenges conventions of the past and reveals an artistic aim of the 'personal' perfected through the technological.

Through the use of digital media, artists can produce endless perfect copies and manipulate what is seen with an unequalled ease and precision. The radical shift in the visual arts, promoted by the introduction of photography in the early half of the twentieth century, is likened to the impact of digital media in the twenty-first century. Digital media and emerging technologies are making artists and critics re-evaluate the visual and aesthetic conventions within art. Charles Steinbeck says of technology in art:

"This technological wonder has assumed countless roles in culture—placing itself at the centre of what could be called the second technological transformation, a shift from the industrial age to the electronic era. It is the fuel from restrictions of the analogue world to the speculative, seemingly limitless potential of an expanding digital universe."

Orthodoxies in art practice have been renovated and reworked by artists employing digital technology and terms such as 'fractal algorithms', 'interactivity', 'temporality', 'post-visual', 'bio-cybernetics' and 'human interface' are key notions that describe the practice of digital artists. The distinction demonstrated with the manipulation of visual information in terms of the binary system used by the computer is important—rather than offering a visual experience of the object in the real world, the computer generates images without ever really seeing—creating and manipulating under the guidance of the artist.

Digital artists employ cutting-edge technology as the cipher for new aesthetics and critical theories. Artists and critics are acknowledging that digital artworks are blurring the boundaries between materiality and immateriality or reality and virtual reality. Digital artists are currently developing a new aesthetic consciousness that extends beyond the personal (in the case of Stelarc), social (Jeffrey Shaw), political (Patricia Piccinini), sexual (Phillip Brophy), cultural (Daniel Lee and Miwa Yanagi) and spiritual (Mariko Mori). Artists are reinventing their own culture in cyberspace in which laws of reality are systematically and artistically refuted. The artist is interested in the fabrication of experiences and sensations that are developed in virtual reality.

Digital art is distinguished by its temporal or still properties and characterised by the imaginative and rebellious approach to reality. In digital media, the dictum that the camera never lies has been subverted—in a digital-imaging practice, realities are distorted and truths fabricated. Digital artists are interested in blurring the synthetic and natural through a variety of approaches to artmaking. Digital photography and computer-generated imaging demonstrate how photo media has evolved. Artists such as Phillip George, Patricia Piccinini, Miwa Yanagi and Daniel Lee use digital technology to produce their imagery. Digital technology has allowed the still image to capture the imaginary, fantastic and often sublime. Temporal digital work includes video, interactive and installation work and also explores the imaginative use of this in media—digital installations by artists such as Dennis Del Favero, interactive media by Joshua Davies or Troy Innocent, and digital videos by Bill Viola and Phillip Brophy. Viewing such artworks is a sophisticated operation that involves taking on multidimensional properties of time, space and perception in a dynamic mixture. Interactivity and immersion are key features of temporal digital artworks. The artist establishes strategies to ensure that the audience moves beyond passive engagement to a dynamic relationship with the artwork. The materiality of the artwork becomes as fluid as the imagination of both the artist and viewer. Digital art could be considered the alchemical media of the twenty-first century that is radically shifting the conventions of art practice and providing new conditions within the reception of the artwork by the audience.
The conceptual framework

**World**

The early twentieth century witnessed a number of new technological advances, such as powered flight and the development of telecommunications and the cinema.

Mechanisation brought about a revolution in both art and society. Art movements such as the Futurists, Constructivists and Vorticists saw technology as the key element that bound the artist to society as well as providing a process to transform humanity from an organic being into a hybrid one, the automaton.

The popular cinema of the phantasmagorical reflected interest in alien and mechanical beings.

The pacemaker is invented, highlighting the use of technology to prolong the health of the human body.

In 1970, the Internet was first used for military and academic purposes. By the 1980s, it had become a powerful tool for the general public. Virtual reality was a catchphrase of the 1980s.

Technology and theory became the key catalyst for iconoclasm of modern aesthetic sensibility. Technological media such as photography, cinema and web design made concrete what was thought of as immaterial, and theories about virtual reality redefined what constituted realism in contemporary society. These two components provided radical innovations for the twentieth century.

Developments in computer-generated imagery and image-manipulation programs gave artists new creative potential in their image making.

The Human Genome Project, begun in 1990, completed the mapping of human DNA and the patenting of diseases.

**Artworks**

*Daum Marries Her Pedantic Automation* George in May 1920; *John Heartfield is Very Glad of It* (1920) *Metropolis* (1926) a film directed by Fritz Lang reveals an expressionistic vision of the future. The excessive growth of consciousness saw artists exploring new significant visual styles, that favoured the conceptual and highlighted a synthesis between technology and artist. The legitimacy of conceptual art allowed the free play of technology by performance artists.

**Audience**

Technology intensified the experience of being. Artists wished to forfeit the passivity of past styles for a dynamic form that fully engaged the audience and captured the spirit of the modern times.

The public of the early twentieth century embraced what the future held and this highlights the obsolescence of nature.

New artworks challenged the audience to develop new aesthetic sensibilities. The Futurists called for a renovated sensitivity of a modern primitive, Constructivism declared that art would start again from the ground up and traditional aesthetic conventions were no longer practical for the viewer.


William Gibson coins the term 'cyberpunk', suggesting a more dystopic view of the future in terms of computer interface.

The commercial companies Animal Logic, Industrial Light & Magic, Dreamwork and Pixar employ computer-generated imaging in films and advertising.

**Artists**

George Grosz, Raoul Hausmann, Hannah Höch and John Heartfield articulated the intervention of technology in society through the use of the automaton—a visual metaphor for the dehumanised being and a signifier for the new times that brought with them mechanised war and industrialisation.

The human form was constantly undergoing metamorphosis in the period of Modernism: Picasso used the African mask, Dalí the melting face, Grosz the mindless automaton and Fernand Léger the robot.

Ed Kienholz continued the development of the automaton in his Pop artworks during the 1960s.

Andy Warhol started a project to make a mechanical replica of himself with life-like movements.

Laurie Anderson explored the incorporation of technology in her performances during the 1980s. She situated the artist as a scientist who employs a process of experimentation to create new forms and events. Often her body would be transformed through technological mediation.

Nam June Paik developed 'proto-virtual beings' in his Fluxus sculptures and performances.
Patricia Piccinini, Orlan and Stelarc produce hybrid forms that originate from a virtual being, through computer-generated images, into physical beings. Daniel Lee, Mariko Mori and Lee Bul blur the boundaries of virtuality and reality in their art practice.

**Case Study**

**Critic in focus—Lev Manovich, Russian, lives in USA**

Cinema has been the most important cultural form/medium of the twentieth century; so it is natural that new media both inherits many conventions from cinema (similarly to how cinema itself inherited conventions from previous nineteenth century forms, in particular a novel) and also contains a promise of replacing cinema as the key new form of the twenty-first century. Methodologically, I find that theory of cinema is more directly relevant to new media than, say, literary theory, because, as new media, cinema is a cultural form heavily based on technology and the evolution of film language is closely linked to the technological developments and changes in cinema’s industrial mode of production.

(Lev Manovich, 2001)

Lev Manovich is a critic who attempts to outline the aesthetic experiences of interactive technology, particularly web-developed programs and interactive cinema. He addresses the transmutation of current aesthetic practice and technological uses. Manovich examines the popularity and changing face of art and design practice, attempting to outline their impact on the visual arts and the way in which the audience interacts with new-media forms such as interactive digital work and web design. He coined the term ‘post-media aesthetics’, suggesting a new paradigm within aesthetics similar to that of Pop Art of the 1960s. He suggests that the organic growth and popularity of the Internet has had a dramatic influence on design and art approaches, and has attempted to articulate the properties of temporal digital work, such as interactive and digital video, in terms of their visual and aesthetic properties relevant to the needs and desires of contemporary culture. Manovich states that the evolution of art in digital media brings about the need for a new system of reading and understanding digital artworks.

**Contemporary practice**

**Cyborgs**

The impact of technology on humans has often been explored by artists throughout history. The Dada artists Georg Grosz’s and Raoul Hausmann’s automatons reflected the psychological dread of the early modernist period. The automaton is the robotic human that signified early modernism’s faith in technology to transform society and everyday life. Modernism was fascinated with this hybrid being and this fascination was reflected in the subject matter of the Cubist painter Fernand Léger, the Futurist sculptures of Umberto Boccioni, the Constructivist sculptures of Naum Gabo and the work of Pop artist Ed Kienholz. These artists created hybrid bodies, part machine and part human form, in sculptural, photographic and painterly forms, reflecting the artist’s fascination with the relationship of humanity and technology and the Zeitgeist of modernism.
Digital artists, through the use of computer-generated imaging, are exploring the realms of bio-cybernetics. The cyborg is the contemporary automaton; the transformation of the body reflects the social and technological values of this hybrid. The organic and the digital merge to produce new representations of humanity. Digital artists recognise the empathetic potency of the human form and use it as a personal and public symbol for the human condition today and perceptions of the future. Artists such as Mariko Mori, Yasuaka Morimura and Lee Bul explore the notion of cultural identity. The body becomes a plastic form in which identity and gender are manipulated through digital means—these artists deal with cultural identity resonating from the body. For such new-media artists as Mori, Morimura and Bul, the human form is structured as a symbol of identity and being, in which the audience recognises the past, present and future fused into one. Pictorial truth is sleakenly manipulated as new-media artists examine how the treatment of the human form is both aesthetic and political. The audience is made aware of the assimilation of the human form through technology, suggesting this is an evolutionary state.

Lee Bul (1964– ), Korea

Lee Bul, a Korean artist, is fascinated and influenced by the cyborg that appears in anime and science fiction films. For her, the cyborg is a symbol of transcendence. It is a being manifested from the subconscious that attempts to change its physical form. Her cyborgs are hybrids of biological, technological and botanical qualities—they are the postmodern equivalent of Frankenstein. Lee presents these cyborgs and, in other series, monsters as museum curiosities—artefacts of popular culture and the utopic proposition of technology that is validated by artists such as Stelarc. Lee’s cyborgs are physical evidence of the human drive towards perfection. With this drive, physical attributes are suppressed in favour of the cybernetic. Lee cites the idealisation of classical Greek statues as a primary influence, as well as Fritz Lang’s film Metropolis and Japanese anime. To Lee, the hybridity of the cyborg is a cultural consideration of postmodernity in which technology provides a meaningful interface with the individual.

The cult of the cyborg has been clearly defined in manga imagery. The Japanese manga comics account for a number of robots and cyborgs, the most famous being Tezuka Osamu’s Astro Boy. The vast popularity of manga and anime in both Eastern and Western societies is capitalised on by artists such as Lee, Philippe Parreno and Momoyo Torimitsu. The imaginary potential of the cyborg is explored as a transnational identity, a fantasy figure borne from popular culture and existing in hyper-reality. In the structure of the genre of comics, artists have produced forms that are a visual account of the psychological anxiety of contemporary society. Artists use the cyborg as a visual convention to convey society’s codependency on technology and the aesthetic stylisation of manga as neo-Pop Art iconography.
Philippe Parreno (1964—), born in Algeria, lives in France

Anywhere Out of the World (2000) is part of an episodic project started in 1999 and finished in 2002. It is a collaborative work, centring on Philippe Parreno and Pierre Huyghe. The two artists created a virtual character, Ann Lee, in a work entitled No Ghost: Just a Shell. This piece has grown into a series of works, including Anywhere Out of the World. Other artists have been invited to participate in the development of Ann Lee and her eventual virtual death. Curiously, in Anywhere Out of the World, Parreno humanises the character by providing a realistic account of how she was obtained through an anime character company. The body of work blurs the boundaries between the virtual and real. Anywhere Out of the World demonstrates the interest artists have with virtual beings, amplifying society's obsession with virtual beings and computer-generated images. The unique strategy of animating Ann Lee fuses cultural interest in manga iconography with the dynamic of video installations and web broadcasts. The character, purchased from an anime company, is used by the artist in collaboration with other artists as a cyber social experiment. The artwork acknowledges its own being and predicament as being virtual. This work reflects a current interest in the techno-sociological—that is, an awareness of the impact of technology on contemporary society.

![Image of Philipparreno Anywhere Out of the World](image)

18.2

Philippe Parreno
Anywhere Out of the World
2000

video stills


This polyhedral modelled digital animation provides a narrative account of Ann Lee's origin. It is set up as a looped video installation. The audience enters the room with an image projected on the wall and the dialogue is spoken by the anime character.

Post-humanism

The *metamorphosis* of the human body into another being such as a cyborg, avatar or virtual being is known as post-humanism. Humanity is no longer purely physical but rather has evolved by incorporating, synthesising and assimilating technology. Artists such as Orlan and Stelarc demonstrate this by developing hybrid human forms in their artmaking. Stelarc boldly decreed that the 'body was obsolete', proclaiming that technology would free the individual from their physical body. Stelarc often merges the visceral with the virtual to create new forms and reveal how the representation of the human form is still being developed.
Technology is now, not only in a distant, science fiction future, an extension of our sensory capacities; it shapes our perceptions and cognitive processes, mediates our relationships with objects of the material and physical world, and our relationships with our own and other bodies.

As de Lauretis states in the above quote, technology is shaping our reality and ourselves. The impact of computers and digital technology is making all life experiences rapid and the potential to create artworks endless. Stelarc explores the territory in which the synthesis of the human with the digital produces the post-human.

**Stelarc (1946– ), Australia**

Stelarc confronts the audience with the question of the effectiveness of the human body in a time of power machines and lightning-fast technology. He suggests in his artworks that there is a need for a synthesis between organic and mechanical—resulting in a cyborg. The performance *Motovar* (2000) explores the need for artificial evolutionary catalysts to ensure the survival of humanity. While using performance as the vehicle for artistic expression, Stelarc mixes ritual with computer interface. He is controlled by an avatar, a virtual being that is created digitally who becomes the puppet master. Stelarc literally becomes a ‘meat puppet’ whose upper body movements are controlled by the avatar. For Stelarc, the concept of the post-human body is a reality that he demonstrates in his performance and work. Stelarc, like many other artists using new media, works in collaborations with computer designers and scientists. Aided by the Tissue Culture and Art Project, Stelarc is participating in a project to graft a third ear to his body. The ear has been sculpted from his skin tissue and grafted by doctors and scientists. Stelarc will use cosmetic surgery in a similar fashion to the way Orlan has used her own body as the basis of her sculptural practice. The boundaries of what constitutes art are being further blurred with these technological interventions. In his practice, Stelarc demonstrates how art can subjugate nature. As a painter may change the features of a landscape, Stelarc is changing the features of his body. His practice reinterprets representations of the human form and approaches to the body’s physical disappearance as seen in *Prosthetic Head*. This is an artificial replica of himself: salient and able to answer questions posed by the audience.

**18.3**

**Stelarc**

**Prosthetic Head**

2003

Interactive computer installation, Melbourne and San Francisco
Programmers: Karen Marcela, Sam Trychin.
3D model: Barrett Fox.

Courtesy: Sherman Galleries, Sydney.

This is part of an ongoing experimentation by the artist with cybernetics. His aim is to fuse both flesh and machine together. He has been described as a postmodern Leonardo da Vinci because of his fascination with technology and its interaction with humanity. Stelarc says ‘the notion of the “obsolete body” runs as a general theme that runs below or aside with everything that I do, but really it’s an exploration of the kinds of aesthetic possibilities of this idea.’ *Prosthetic Head* is a 3000-polygon-rendered form of the artist’s head. It is an artificial intelligence that can answer questions typed in by the audience and learns from its interaction.
Daniel Lee (1945–), born in China, lives in USA/Taiwan

Similarly to Piccinini and Stelarc, Lee provides a visual account of the transformative situation of humanity due to the influences of technology. In this portrait, Lee employs digital image manipulation to create an evocative vision of the future that alludes to a primitive dystopic situation. Lee employs technology to create a new Surrealism—a view of humanity that is deeply psychological and resonates with fear and desire. His work creates a polemic of beauty and grotesque, and of human and post-human. This portrait dwells upon the intellect and emotions of the audience. Like Piccinini, Lee explores the aesthetics of the transgenetic, a pictorial intelligence that deals with futuristic imagination and technology. Computer-generated imaging allows for a plasticity of biology—this bovine being is plausible in reality and dreams as a mutant creature.

Stelarc, Lee and Piccinini use the organic, virtual or cyborg bodies as a metaphor and a corpus delicti for the future. In two-, three- and four-dimensional forms, tactility is merged with simulation—flesh for metal and plastics and reality for virtuality. All these transitions are concerned with the artist’s representation of the cyborg. The presence of technology signifies the maturation of digital technology as a dominant media within contemporary art practice. As the critic William Mitchell outlines in Art in the Age of Biocytbernetics, digital media allows for the endless production of perfect copies and artists are able to refine and reshape the materiality of their artworks in new ways previously unknown to artists.

Case study

Curator in focus—Kathy Cleeland

Kathy Cleeland, a lecturer and curator, is extensively involved in curating exhibitions based in digital media, including Cybercultures, an ongoing project that exhibits digital artworks in Australia in a physical and virtual space. The aim of the project is to enhance awareness of digital practice and emerging technologies and how artists have applied such technologies in their artmaking. Cleeland states that ‘the posthuman landscape of the twenty-first century promises to be one of profound changes and challenges for the human species.’ She acknowledges the impact of digital technology and offers strategies to make digital technology an intelligible aesthetic practice. Like many other artists and critics, she views digital media as an aesthetic mutation that modifies current practice and provides a hybrid. In this hybrid, the orientation of the form no longer needs to address the restraints of the physical place nor the passivity of the audience that is just looking. Instead, a key part of many works is the element of interactivity.

The simulation of people on computers and the development of avatars on the Internet demonstrate the potential of cybernetics to usurp the consciousness and physical qualities of the human body. The Internet itself has been described as a ‘global nervous system’, suggesting that it is a thinking and feeling entity. Postmodern theorists such as Anna Munster, Jean Baudrillard and William Mitchell differentiate the impact of cyborgs and simulated and virtual beings on our society, suggesting that cultures have been greatly changed through digital technology. The passivity of traditional conventions in art responding to the human form is redundant in the structure of digital art. The body is no longer an autonomous subject, rather it becomes an interactive object that is dynamic.
Patricia Piccinini (1965– ), born in Sierra Leone, lives in Australia

Technology is a catalyst for change in social interaction. Some artists believe a number of subjects can be developed from the collision of humanity with emerging technology. Piccinini graphically demonstrates the precarious situation of the human species and the intervention of technology with its natural evolutionary state. She presents a visual rationalisation of issues such as the impact of the Human Genome Project, cloning and biotechnics. The title of her work at the 50th Venice Biennale in 2003 was *We are Family*, alluding to the splicing of synthetic and natural organisms and the sophistication of digital simulation of organic forms. She uses digital stills and video to create mutant creatures that are both pets and beings in the not-too-distant future. Through irony and provocation, she makes the viewer aware of their relationship with the world of bio-cybermetics, where what is real can be synthesised, as often society desires the virtual or simulacra in favour of the physical. The cyborg is rapidly replacing humanity. The term 'post-human' relates to beings that are synthesised with technology or are solely manufactured by artificial means. Piccinini demonstrates rationality in her artmaking that uses technology as the springboard for her imagination. Works such as *Still Life with Stem Cell* (2003) and *SO2 (Synthetic Organism 2)* (2000) give the audience a surreal picture of the future. Since the early 1980s, Piccinini has been developing a body of work that investigates bio-engineering and its interaction with society through commodification and fashion.

18.5
Patricia Piccinini
*Subset—Red Portrait*
From the series: *Prickly Lattice*
1997
Digital C-type colour photograph
80 x 80 cm
Courtesy of the artist and Tolarno Galleries, Melbourne.
This image reflects the postulations Piccinini makes about the future. She situates the realm of genetic engineering in the present, her stylised format reflecting a fashion magazine spread suggestive of advertising and the social ease of technological assimilation in society.

18.6
Patricia Piccinini
*The Young Family*
2002–2003
silicone, acrylic, human hair, leather, timber
80 x 150 x 110 cm
Courtesy of the artist and Tolarno Galleries, Melbourne.
This artwork makes concrete the speculations that have recently arisen in the mapping of the human genome and the impact of bio-engineering. Piccinini creates a reclining figure, not dissimilar to a mother-and-child portrait. However, this portrait is one of the future and post-genetic engineering. She presents an archetypal image of the post-human, a hybrid, whose essence of humanity has been engineered rather than bred for a purpose. Piccinini has constructed a 'hy-Fam', a reminder of the folly of life in a time of genetic manipulation.
Later works such as Game Boy Advanced (2002) and The Young Family (2002–03) merge the real with the virtual through the material practice of producing hyper-real wax mannequins. She used the same strategy as the sculptor Duane Hanson in producing realistic life-size models that inhabit the gallery space. It takes some time for the audience to realise their presence and Piccinini doubles the element of surprise through the uncanny representation of post-humanity. She stated in 2003:

*The works all occupy a place somewhere between truth and fiction, which their extraordinary verisimilitude underlines. They do not necessarily depict a vision of the future that the biotech companies would present us with. I'm interested in what the future might look like if it turns out differently from how we expect it to.*

**Case Study**

**Virtual beings**

The convention of viewing art in a gallery has also been challenged by digital artists, as galleries and beings can exist in cyberspace, allowing the audience the freedom to view art at any time from anywhere. Currently, arguments arise about the effective engagement with the materiality of art on the Internet, but as science develops so too does the resolution and quality of what is being shown. The digital artists Troy Innocent and Melinda Rackham explore the potential of digital beings on the Internet. Both artists reflect different interpretations, but paramount to their practice is the promotion of interactivity with the audience to connect the viewer/user and the artwork. Providing effective immersion, this activity is a key characteristic of interactive technology and shifts the traditional passivity of viewing artworks in a gallery context. Through the audience's interaction with the websites constructed by artists, the distinction between the lived experience of the audience and the mediated experience constructed by the digital artist is being eroded. Digital artists using the Internet are redefining the 'logic of the white cube'—the idea that art should be placed in a pristine space such as a gallery or museum. Well-constructed virtual sites and artworks, offer a heightened velocity of experience. The artist curates their own existence and, through the audience's interaction, any distancing from the artwork is disrupted. The multifarious quality of virtual artworks draws into art practice a new consideration of the form and the reception of the work.
Artists using emerging technology both acknowledge and challenge conventions of the past. It is an audacious action to engineer and manipulate the human form, yet artists interested in cyborgs and virtual beings see them as the quintessential postmodern being. The cyborg is an expression of materiality in which technology fabricates and merges the organic with the inorganic. The cyborg developed by contemporary artists link to the automatons of the Dada and Futurist art movements. Both these modernist art movements, and new media artists, wish to reflect the paradigm shifts brought by new technologies. For modernist artists it was the advent of the automotive industry, and for contemporary artists the developments in bio-engineering and computer technology that radically changed attitudes towards humanity and its relationship with technology.

Case Study

Sci-fi aesthetics—art and technology

Contemporary artists constantly employ cutting-edge technology to produce new-media works and extend the domain of the artist's practice. Artists such as Lee Bul, Stelarc and Ricky Swallow examine how technology influences and aligns their practice to create new aesthetic forms.

Ricky Swallow’s iMan Prototypes (2001) critiques humanity’s existence and evolution in a postmodern world. A relationship between cybernetics, fashionable design and life is fabricated and is a dialogue that scrutinises ethics and biotechnology. The iMan Prototypes is a synthesis of stylish industrial design and humanity in which Swallow discloses the social desire of designer objects. While the skull signifies the temporal nature of life, the work relates back to the tradition of Dutch paintings and the motif of the memento mori. It also reveals in the subversion of life through technology, as the skulls have been modelled on the Apple Macintosh iMac® design released in 1998. The visual convention of the memento mori is doubled through the sleek design and sophisticated process of construction. Swallow parodies the tradition of painting and the contemporary design world. This work is a contemporary reminder of death and current developments in extending life-expectancy through biocybernetics. The term 'prototype' suggests an evolutionary stage in which the model can be improved. Swallow is provocative in the idea that technology is speeding up the evolution of humanity and the iMan Prototypes, reflecting his interest in human evolution and the cult of the robot. Swallow's work Humans are Smarter/Prequel (1998) dealt with similar themes of the cybernetic. Swallow is interested in how popular media, particularly cinema, depicts technology and the impact of science fiction in the development of a visual style. He references objects and props from films such as ET, Star Wars, Star Trek and Logan’s Run to construct his sculptures. Swallow acknowledges the importance of cinema in providing highly imaginative outcomes for the future and makes the fantastic tangible in his sculptures. His works dealing with detailed observations of imaginary objects suggest that these objects tap into the consciousness of a postmodern society that values the transformative power of technology. Swallow’s practice is counterbalanced by addressing the everyday and tangible, such as a pair of sneakers or a life-size bust of himself. (See also pp. 205–7.)
IDEAS FOR FURTHER CASE STUDY RESEARCH

Personal (subjective) frame
Artists are interested in the effect of technological intervention on humanity. Provide an account of an artist who explores this issue.

Formal (structural) frame
What are the considerations an artist must have in the construction of an interactive design? Provide examples.

Social (cultural) frame
Art reflects the society from which it is produced. In the contemporary world, technology plays a key role. The development of technology in art greatly influences the processes of production. The artist becomes the coordinator who supervises the production of artworks in which specialists such as computer-aided designers and industrial designers are constructing the object. How have artists used technology to give an account of their society?

Contemporary (postmodern) frame
New-media artists employ digital technology to destabilise traditional approaches to artwork. Interactive and web design highlights the fact that the artwork is not a static object but rather a constantly changing and evolving form. Select an artist who uses audience interaction and account for how it challenges traditional practice.

SEARCH

International: Orlan, Jane Alexander, Lisa Reihana, Spacekraft, Nalini Malani.
Australia: SymbioticA, Linda Dement, Julie Rap, Rebecca Canon.