Media Mirrors and Image Avatars

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This paper looks at modes of audience engagement in video art and interactive digital media installations where media act as mirrors enabling audiences to observe and interact in a variety of ways with their own image avatars. The paper explores the ways different media constitute and encourage new forms of subjectivity and new ways of seeing ourselves as visible entities and images in the world. As well as looking at some examples of recent new media work, this paper also draws on the work of early video artists whose works are important precursors to these more recent new media art installations.

The story of the youth Narcissus, who falls in love with his own image reflected in a pool, is an archetypal myth symbolising our human love affair with our own image. According to media theorist Marshall McLuhan, the key lesson of the Narcissus myth is that "men at once become fascinated by any extension of themselves in any material other than themselves" (1967, 51). Through our immediate (unmediated) vision we can only see parts of our bodies and, significantly, never our face which is the primary cultural locus of identity. It is only through mediated images such as the mirror reflection that we can see our whole body and our face as a unified image. The mirror image is our first image avatar but the invention of new media technologies in the last 150 years have offered new ways of reflecting and representing ourselves as image avatars.

Over the last 150 years, these new media and imaging technologies have transformed in very profound ways how we see ourselves and others not just as physical entities in the world but also as *mediated images*. These mediated images of the self can be seen as avatars, visual stand-ins and manifestations of the self that double or multiply the self recreating it as a virtual presence. Mirror reflections, photographs and the moving images of film and video as well as the digital image recreate the self-body beyond itself as an external representation, as an image avatar. It is through these different image avatars that we can literally come face-to-face with ourselves. This has profound implications for notions and experiences of subjectivity and how we think of ourselves as visual and visible entities in the world.

1. The Image Avatar

In his essay "Of Other Spaces" (1986) Foucault describes the mirror image as a paradoxical amalgam of the real and the virtual where the self is both present and absent:

> In the mirror, I see myself there where I am not, in an unreal, virtual space that opens up behind the surface; I am over there, there where I am not, a sort of shadow that gives my own visibility to myself, that enables me to see myself there where I am absent… (Foucault 1986, 24)

In the mirror image, the self is externalised as an image-object outside of the self. Once the self becomes externalised as an image avatar, the self becomes split, distanced from itself—simultaneously self and other. In *Camera Lucida*, Roland Barthes describes this uncanny splitting and doubling of the self when he looks at his photographic image as "the cunning advent of myself as other" (1993, 12). The mediated self represented by the image avatar thus acts as a visual metaphor of split subjectivity where the self can directly apprehend itself as an other. This intriguing and uncanny experience of seeing ourselves as an externalised image or picture, as an *other*, in mirrors, photographs, video and digital images, creates new possibilities for self-observation and self-presentation.

2. The Mirror Avatar

The mirror image plays a key role in Lacanian psychoanalytic theory, where the infant first comes to know itself as an individuated subject during the so-called mirror stage which takes place somewhere between six and eighteen months of age. The human infant's recognition of itself in its mirror image and its identification with that image, initiates an awareness of the self as an "I", as a subject and image in the world:

> We have only to understand the mirror stage *as an identification*, in the full sense that analysis gives to the term: namely, the transformation that takes place in the subject when he assumes an image—whose predestination to this phase-effect is sufficiently indicated by the use, in analytic theory, of the ancient term *imago*. (Lacan 1977, 2)

Lacan uses the Latin term imago to describe the virtual image of the self in the mirror. The imago is external to the infant so that the apprehension of the self—of an "I"—comes into being not as an interior awareness of self, but as the result of an encounter with an externalised specular image. For Lacan, the human child's captivation with its own image is evidence of a particularly human fascination with the virtual image:

> This act [the infant's recognition of its image in the mirror], far from exhausting itself, as in the case of the monkey, once the image has been mastered and found empty, immediately rebounds in the case of the child in a series of gestures in which he experiences in play the relation between the movements assumed in the image and the reflected environment, and between this virtual complex and the reality it reduplicates—the child's own body, and the persons and things, around him. (Lacan 1977, 1)

For Lacan, this recognition of the self in the mirror image is a 'mis-recognition' (méconnaissance). The seemingly unified, coherent image of the self in the mirror imago is actually only a seductive fiction, the first in a series of imaginary identifications with fictive images and phantoms of the self that the subject is destined to make throughout her life.

The subject's narcissistic self-regard of its mirror image also been identified as a key characteristic of the video medium. In her influential article "Video: The Aesthetics of Narcissism," (1986) American art critic Rosalind Krauss posits narcissism as the defining feature of early video art and video installations. The ability of video technology to record and transmit at the same time provides instantaneous image feedback, so that the video monitor becomes a mirror, a medium for self-reflection and self-observation. The medium enables a solipsistic 'self-encapsulation' enabling the artist or the audience member to interact with images of themselves.

3. The Video Avatar

Images of audience members, captured by live-feed video cameras, enable the audience participants to become part of the art work and to experience the uncanny splitting of the image from the self, the 'othering' of the image. The video avatar acts as an uncanny double or doppelganger confronting the audience participant with strange and intriguing views of the self spatially or temporally displaced.

Unlike the mirror image, which is directly controlled in real time by the movements of the viewer, the video image allows a temporal dislocation where the movements of the video seem to take on an apparent life of their own beyond the control of the viewer. Margaret Morse describes the video avatar image as a 'video replicant' "…free to wander, no longer tied to a mirror position; once recorded, it is unleashed in time as well to enjoy its semiautonomous but ever so repetitive existence" (Morse 1998, 172).

Also unlike the mirror image, which is controlled by the embodied eye of the viewer and their position in relation to the mirror, the video mirror image is controlled by a disembodied external eye, that of the video camera itself. When the video camera is positioned to capture a frontal image of the audience, the video mirror reflects a more or less familiar mirror image, one that appears to be under the visual control of the viewer and their frontal gaze. However, if the video camera is positioned to the side of the viewer or, even more disconcertingly, behind them, the reflection displayed in the video mirror is unnervingly unfamiliar showing the viewer an image of themselves that is radically exterior to their own look. Positioning the camera to the side of or behind the viewer thus gives the sense that the viewer is being observed or spied on inducing a disquieting feeling of unease and mild paranoia.

In *The Four Fundamental Concepts of Pyscho-Analysis* (1978), Lacan uses the external eye of the camera as a metaphor for the operation of the gaze which fixes us in its field of vision as an object-image:

> …in the scopic field, the gaze is outside, I am looked at, that is to say, I am a picture." "What determines me, at the most profound level, in the visible, is the gaze that is outside. …the gaze is the instrument through which …I am *photo-graphed*. (Lacan 1978, 106)

Bruce Nauman's closed-circuit video installation *Live/Taped Video Corridor* (1969-70) shows audience participants the uncanny image of themselves as seen from behind. As soon as an audience member enters the corridor, and this is typically done one at a time because of the narrowness of the corridor, their image is captured and displayed on the monitor at the other end of the corridor. Unlike the familiar mirror image of the self where the subject sees a frontal image of themselves, typically their face, in *Live/Taped Video Corridor* the audience is confronted by a view of themselves where they can only see a rear-view image of themselves and the back of their heads. This evokes the same uncanny feeling as Magritte's famous painting *La reproduction interdite* (1937) which shows a man looking into a mirror that reflects an image of the back of his head instead of the expected image of his face. The disturbing uncanniness of Magritte's painting lies in its literal effacement of identity, the reflected image of a man with no face.

Live/Taped Video Corridor also confounds our expectations in another way. The closer we get to the monitor at the end of the corridor, the further away we are from the camera at the other end of the corridor, and the smaller our image becomes. Again, this experience is diametrically opposed to the way mirror images work where the closer we get, the larger and more detailed our image becomes. Audience participants have the uncanny and alienating experience of appearing to walk away from themselves rather than towards themselves.

Margaret Morse comments on her profound experience of dislocation and defamiliarisation during her personal experience of *Live Taped Video Corridor*: "To me it was as if my body had come unglued from my own image, as if the ground of my orientation in space had been pulled out from under me" (Morse, 1998, 155-56).

This same uncanny disorientation where the video mirror refuses to reveal a frontal view of the spectator-participant is also exploited in Peter Weibel's *Observing Observation: Uncertainty* (1973). The installation consists of three video cameras positioned at the perimeter of a circle. The cameras are set up in such a way that audience members can observe different parts and views of their own bodies but

they can never see their faces no matter how many different positions and placements they try.

Dan Graham's installation *Present Continuous Past(s)* (1974) uses mirrors as well as video technology to insert the audience into the installation, presenting them with discontinuous but simultaneous avatar images of themselves at different time intervals. The installation comprises a mirrored room with a video monitor set into the middle of one of the walls. The mirror shows the audience members reflected images of themselves in the present. A video camera tapes this same action simultaneously, capturing the image of the audience in the room of the installation as well as their reflection in the mirror. The image captured by the video camera is displayed on a video monitor with an 8 second delay so that the audience has the uncanny experience of seeing themselves duplicated both temporally and spatially, appearing in different temporal intervals (present and past) and spatial locations (the mirror and the video monitor.) Their mirror-avatar is temporally present while their video avatar shows them images of themselves that are temporally past. A recursive effect is also achieved by pointing the camera at the mirror image, creates an infinite feedback loop multiplying the video and mirror avatar images and different time intervals.

More recent works such as Paul Sermon's telematic video installations add an extra level of uncanniness by manipulating the video image itself and bringing together, in the same image, the video avatars of audiences from physically separate locations. In works such as *Telematic Dreaming* (1992), *Telematic Vision* (1993), *Telematic Encounter* (1996) and *There's No Simulation Like Home* (1999), the audience-spectator becomes a participant-performer in a shared telepresent environment. The works use live chroma-keying and videoconferencing technology to bring together three distinct spaces. There are the two physical spaces of the remote participant-performers and the shared, virtual 'third space' where the video avatars of the participant-performers are digitally composited in real time to create a shared virtual reality enabling the video avatars to interact with each other.

Sermon describes the video avatar as a 'body double' or video puppet which is controlled in real time by the audience members. However, learning to control your video avatar or puppet can take some time and is uncomfortably counter-intuitive at first. Although the video avatar is actually a more accurate reflection than the mirror image, which shows a reversed left-right image, nevertheless, we are very used to seeing and controlling this reversed mirror image, so much so that it feels completely natural. Controlling your video avatar image, on the other hand, is uncannily unfamiliar. When you look in the video mirror and raise your right arm, the video avatar raises its arm on the opposite side from your arm. The initial movements of audiences are typically

uncoordinated and clumsy until they have successfully managed to cognitively remap right to left.

4. Image Avatars and the Digital Image

Digital video works incorporating audience images and themes of surveillance and observation continue to be explored by more recent artists making use of the capacities of digital imaging and sequencing technologies to manipulate and display images of the audience. The digital avatars displayed in these works bear strong similarities to the video avatars discussed above, but digital technologies enable more sophisticated manipulations of the avatar image. The use of digital databases to store images and image sequences that can then be retrieved and re-presented create expanded possibilities for both spatial and temporal manipulations of the avatar image.

Alex Davies' work *Swarm* (2003) uses captured images of the audience to create a dynamic live audio-visual environment. The captured images of the audience are projected using two data projectors to create a long narrow viewing field across one of the walls of the gallery. The projection acts as an uncanny video mirror where the audience sees images of themselves as well as images of previous exhibition visitors. There are three layers of video images: one taken in real time, the second drawn from the most recently captured footage and a third layer selected at random from the database. The video system transitions rapidly through the different layers so that images appear and disappear creating a shimmering translucent effect. Video reflections of the audience members are revealed by a moving mask or window that travels horizontally across the viewing plane where the phantom video avatars are projected. As the video mask moves across the space, the width of the window also dynamically changes, triggering a spatialised audioscape made up of ambient sounds, footsteps and murmuring voices. Over the period of the exhibition, the work accumulates thousands of video fragments in its database, any one of which may reappear days or even weeks after a particular individual or group has left the exhibition. The video phantoms appear, sometimes singly, sometimes in groups, providing a ghostly record of previous exhibition visitors eerily mingling in the same visual plane as the images of current visitors.

Alex Davies' work *Dislocation* (2005) also plays with themes of audience self-surveillance where real time images are layered with uncanny phantom images. In *Dislocation*, real time video images of the audience are captured and then digitally composited with images of pre-recorded video characters.

The audience enters an empty gallery room where there are four individual portals set into one of the walls. As you look through a portal you see what appears to be simple closed-circuit video feed of the

gallery room you are in including your own image seen from behind looking into one of the portals.

The auto-voyeurism of watching your own image is given an uncanny and disturbing twist when you also become the unwitting observer of a number of different scenarios that are apparently being played out in the room behind you. As you watch though the portal, you may see a man enter the room and walk up behind you or a young couple come into the room and start kissing, or a security guard enters with a barking dog. This uncanny sense of bodily presence behind you and your own possible vulnerability to these presences induces you to turn around to look behind you but when you do you are confronted with an empty room.

The real and the virtual seamlessly merge in the video image that the audience participants see through the individual portals. Indeed, once the audience's image is digitally captured it too becomes virtualised. The work plays with notions of appearance and reality, the 'real' indexical images of the audience and the pre-recorded phantom video characters occupy the same viewing plane, their apparent reality only shown to be false when the audience member turns around to confront an empty space where they expect to see the virtual character. The simultaneous presence and absence of these digital phantoms sets up an uncanny simulated hyperreality where you cannot trust the evidence of your own eyes. The hyperreal fabrication of the digital image subverts the traditional 'seeing is believing' ethos of traditional video.

5. The Transformative Digital Mirror

The image avatars created by analogue technologies all reflect a self that has a directly recognisable referent in the real world. However, with the digital avatar, this direct representation may no longer apply as the digital self can be manipulated, transformed and mutated just as easily as any other digital image.

Artist and theorist David Rokeby describes interactive computer systems as 'transforming mirrors' (1995). However, unlike the traditional mirror and its photographic, cinematic and video analogues, with their straightforward reflection of what is in front of them, the reflections provided by the computer can be 'refracted' or altered to create a myriad of radically transformative effects. As Rokeby describes it:

> … an interactive technology is a medium through which we communicate with ourselves—a mirror. The medium not only reflects back, but also refracts what it is given; what is returned is ourselves, transformed and processed. To the degree that the technology reflects ourselves back recognizably, it provides us with a self-image, a sense of self. To the degree that the technology transforms our image in the act of reflection, it provides us with a sense of the relations between this self and the experienced world. (Rokeby 1995, 133)

Digital imaging technologies can add an extra layer of uncanniness by seamlessly manipulating the image of the audience member in real time, so their video mirror image is transformed or mutated or their real image is blended with the 'unreal' to create a new composite virtual reality as it is with Alex Davies' *Dislocation*.

The digital mirror reveals the radically transformative nature of the eye/gaze of digital technologies. The digital avatar reflected in the digital mirror takes on an uncanny strangeness, reflecting some recognisable visual elements of the viewer mixed with strange mutations and distortions. Dynamic graphical effects such as image morphing can be applied to the viewer's image in real time creating a 'transformed' digital reflection.

In his series of software mirrors, Daniel Rozin uses automated computer programs to parse and transform images of the audience. The viewer's image is captured by video camera and then digitally manipulated before being dynamically displayed on the mirror-screen. The transformed reflections are synchronised with the movements of the viewer creating a strong causal connection between the viewer and their digital avatar reflection. In *Time Scan Mirror* (2004), images of the viewer's face are sampled over a period of 30 seconds to create multiple perspectives of their face, which are spatially stretched out and dynamically scrolled across the screen.

The interactive installation *Liquid Views: the virtual mirror of Narcissus* (1993) by German artists Monika Fleischmann and Wolfgang Strauss (with Christian-A. Bohn) recreates the archetypal myth of Narcissus in the digital realm. A computer monitor with a touch screen is embedded in a pedestal screen-side up so when the viewer looks down into the screen of the monitor they see their own face reflected back at them as though they were looking into a pool of water. The image of the viewer is captured by a live video camera and a transformative computer algorithm is applied to the image so that it appears as if it is under water. When the viewer touches their image, the image begins to blur and the water to ripple. Art critic Christiane Paul comments on the transformative nature of the digital mirror in *Liquid Views*:

> *Liquid Views* both translates the corporeal experience of the reflection into the virtual realm and at the same time unveils the function of the interface as a technological device that translates the viewer's image into the virtual space of reflections. Interaction entails a distortion of the image that is controlled by the laws of the machine. (Paul 2003, 169)

Alba D'Urbano's interactive installation *Touch Me* (1995) also uses a digital transformation to enact a reversed 'othering' process where the 'other' of the artist becomes the 'self' of the viewer. The installation, which comprises a touch screen monitor, computer and video camera, is

activated by the invoked touch of the viewer. The artist's video portrait is initially displayed on the monitor but this portrait is progressively erased by the touch of the viewer. As the viewer touches the artist's face, the digital image appears to dissolve, revealing beneath it portions of the viewer's own face until the artist's portrait disappears completely leaving only the face of the viewer herself. The progression from 'other' to 'self' is a temporary one as the image soon reverts to its starting sequence to begin the process again.

With the transformative nature of the digital image, viewers may also experience a loss of control of their avatar image. Although the physical body and actions of audience members may be used as source material for the avatar image, transformative computer algorithms enable the digital avatar image to become increasingly alien and unrecognisable in its appearance and/or autonomous in its movements. When the appearance and actions of the digital avatar exceed the control and agency of the viewer, the sense of the 'otherness' of the digital avatar image increases.

Alter Ego (2002-2004), an interactive installation by Alexa Wright and Alf Linney, presents audiences with another uncanny digital mirror. In the installation, the audience member is invited to enter a darkened room and sit in a chair in front of what appears to be a large, dark mirror with a ghostly white mask-like image reflected on it. As you line up your face with the white mask, your image is captured by a camera located in the frame of the mirror. Once your image is successfully captured it is mapped onto a 3D digital model and your digital mirror image is suddenly reflected back at you. *Alter Ego* represents a literal example of Barthes' "cunning advent of the self made other" where the self is re-embodied and animated as a digital doppelganger that assumes its own agency and interacts in a semi-autonomous fashion with the gallery visitor. It is as if your mirror reflection or your shadow suddenly took on a life of its own, an uncanny and unsettling experience. Once this digital doppelganger appears, it starts to mimic your facial expressions but soon it begins to act more autonomously. This is the self literally made other.

6. Conclusion

In the future, we will see more artworks that experiment with these increasingly transformed and mutable digital avatars. Just as with earlier media mirrors and image avatars, these new technologically mediated reflections of the self enable audiences to see and observe themselves in new and novel ways. As with the mirror image, these new image avatars also allow new forms of subjectivity and virtual embodiment.

The increasing non-coincidence of the digital avatar with the physical self-body, enables a projection of idealised image avatars that can be digitally enhanced and altered to present more fluid and 'programmable'

selves. These new selves can also act and interact at a distance either under the direct control of their human user or with varying levels of autonomy. The digital avatar can be seen as a supplementary or prosthetic identity—a transitional self—enabling productive new forms of identity experimentation and play such as those seen in computer games and virtual worlds.

By creating compelling exhibition experiences where audiences can observe and interact with their own image avatars, artists play an important role in helping us interrogate and experience the different ontologies of these mediated image avatars.

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