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**Replacements/ Displacement**

**Abstract**

The bodily experience in telemedicine is incomplete, for it does not allow touching, it has no flesh, it is cold and sterile, leaving no or little possibility of secretions and contaminations.

My research questions the role of the observing body and the assisting diagnostic and surgical technologies, that is, the contemporary medical gaze in the effect on the subjective perceptions of the patient and his/her illness and treatment. I have sought to conflate/integrate the psychological spaces of the surgeon/diagnostician and the patient within my own sphere of perception through a visualization/virtualization of medical space and apparatuses from the viewpoint of the patient. The image making technologies distance the artist's hand from the surface of the image (ie, 3D computer generated imagery) which is echoed in the surgeon's distance from the patient in the application of telemedical diagnosis and surgery.

My work encompasses the use of larger-than-life models and 3D computer generated imagery, both in print form and as installations of projected animation.

**Biography**

Born in Stockholm, Sweden (1969), I migrated to Australia with my family in 1983. With both parents, scientists, (mother in Chemistry and father a Doctor in Artificial Intelligence), I was strongly influenced to pursue a life in the sciences yet simultaneously encouraged to pursue my love of art. I majored in Painting as an undergraduate, but was always aware of and interested in new technologies. Diagnosed with a Chronic illness in 1998, I have had the experience of spending many hours in hospital in the embrace of all manner of new technologies and this has fueled my current research agenda. In the near future I am hoping to study electronic media abroad, where the collaboration between artists and programmers and engineers, and access to advanced technologies on large scale projects is currently expanding the boundaries of the relationship between art and science.

**Replacements/ Displacement**

*The hermetic, airless quality of the supermodern institution/clinic evokes a world that has lost its memory, a world without depth, in which reality, gradually engulfed by the relentless proliferation of digital information, disappears. The space continuously shifts and melts, emphasizing its uncanny and psychological saturation. Panels and planes dissolve into a translucent haze, the kind of half-conscious, momentary, fuzz-out before the percipient comes to...or blacks out. The endless looping of the camera creates the sense of simultaneously going somewhere and nowhere, and of repeatedly discovering the past inside the present. Fluorescent light, passes through the frame without any real change in complexion. All of this builds to a signification of the patient's lack of control. The sterile, unpeopled geometries of this intensely psychological space point to the mood of the digital age, which has seen the cooling effect of the technological gaze into every last corner of our being...*

( computer animation "Disembodied 2" 2003)

*"The computer mediated milieu renders the body nakedly public... Similarly, one result of the new non-invasive imaging technologies in the area of medicine is the capability of turning a person inside out. It conjures up foreboding visions of an all-powerful observer who has instant visual access to the anatomy, biochemistry, and physiology of a patient" 1*

Nowadays, we are surrounded by optical devices that produce magic on demand: DVD players linked to high definition TV screens, laptops with full colour liquid crystal displays and wireless Internet connectivity, point-and-shoot digital cameras that create e-mailable images in an instant. Similar trends are seen in the fields of medical and scientific research. Medical technologies are peculiarly intimate, in that we, our bodies, are the material upon which they operate. Within the optic of medical technology the body is mere matter, no different in kind to other types of matter, subject to experimentation and technical manipulation. Depersonalization becoming synonymous with patient confidentiality. Body scanners

survey and capture images of the body's most intimate zones and display them for the gaze of the laboratory technician. Fragmented images of patients' bodies are classified and catalogued by strings of alphanumeric characters rather than names. The body becomes conspicuously absent, its presence suggested in the imaged space mediated by the institutions' artefacts and apparatus.<sup>2</sup>

Similar trends may be evident in surgery, in that the surgeon does not directly perceive the diseased parts, but rather sees with the aid and from the viewpoint of ingested/inserted micro cameras, via eyepieces and video monitors. During the course of its journey through the body, the camera transmits two images per second to a receiver - the doctor who will later diagnose the images in the comfort of his/her office. Therefore the direct hands-on approach of past days seems to have virtually disappeared. With the spread of telemedicine and virtual medicine, one may argue that a direct perception of the body has begun to lose currency.

My work and research seek to question the role of the contemporary medical gaze in the effect on the subjective perceptions of the patient and his/her illness and treatment. I have sought to integrate the psychological spaces of the surgeon/diagnostician and the patient within my own sphere of perception through an exploration of medical space and apparatus, utilizing larger-than-life sculptures, 3D computer generated video projections and sound construction in gallery wide installations. Whilst the high-precision computer renderings in the large computer generated prints may seem to be based on actual models, they are completely fictional having been wholly constructed on the computer. These images present distorted points of view adding to the sense of dislocation or a controlled disorientation through technology.

The image making technologies that I use distance the artist's hand from the surface of the image, (ie, hand to mouse/keyboard to monitor) which is echoed in the surgeon's distance from the patient in the application of telemedical diagnosis and surgery. My background in painting however, tends to render a computer generated image/video with a quality that lies somewhere between the mathematical precision of the pixel, the spline or the vertex and the subtlety and warmth of painting.

It is important to note that my research does not solely revolve around the subject of recent or future medical technologies but investigates the history of the medical gaze. The documented history of the medical gaze reveals a tableau densely interwoven with the history of spectacle, where the previously freakish and inaccessible viscera were rendered accessible and covertly aesthetic via the respectability of medical science. Well educated people often went to anatomical theatres where they dined, viewed art and touched the corpses on display.

### The Gaze

In a large, dark, empty looking room, an apparatus sits waiting for patients or experimental subjects - to approach it, one at a time so that it can begin to perform its task....

French post modern philosopher Jacques Lacan writes; *"I can feel myself under the gaze of someone whose eyes I do not even see, not even discern. All that is necessary is for something to signify to me that there may be others there. The window if it gets a bit dark and if I have reasons for thinking that there is someone behind it, is straightaway a gaze. From the moment this gaze exists, I am already something other, in that I feel myself become an object for the gaze of others. But in this position, which is a reciprocal one, others also know that I am an object who knows himself to be seen"* <sup>3</sup>

Lacan describes the subject's experience of being constituted as a given-to-be-seen under the gaze as one of anxiety and alienation. His formulation of the gaze entails that the human being's subjectivity is determined through a gaze which places the subject under observation, causing the subject to experience themselves as an object which is seen.

*"...the view within the scopic field is outside, they are watching me, that is, I am the image."* <sup>4</sup>

The concept of the intrusive medical eye is of course, not a recent one. Art historian Barbara Stafford has written extensively about eighteenth-century optical science and medicine. In her article "Voyeur or Observer? Enlightenment Thoughts on the Dilemmas on Display", Stafford discusses the way humans have for centuries had yearnings for visually entering different realms. *"Strange scenes occurred at the bottom of an optical instrument and were surveyed distantly from the top of the tube... Beguiling*

*dimensions, unknown to earlier generations, were thrown on a distant screen for the diversion of an audience; they no longer existed just for the distraction or edification of a solitary viewer" 5*

Like stepping through the doors of theatres during the late eighteenth century in America, one would find a society captivated by optical instruments, virtual images, and phantasmatic projections. Peering through the eyeglass of a microscope, then, the spectator witnessed a most remarkable illusion: the flat print upon the table was transformed into a three dimensional space that seemed to project and recede before one's eyes. These were also referred to as 'optical toys' within the more privileged socio-economic groups.

Stafford refers to several scientists of this era and their need to make the invisible visible or to give the illusion of looking in on a private world. She describes this as the "*pleasure of viewing pain*" 6 and making the event a cinematic spectacle. Live frogs and other 'small' creatures were dissected and stretched with fishhooks in front of the microscope. The audience found this event quite spectacular and with the aid of projection by solar microscope they could see the internals of the frog. "*The magnified circulation of the blood appeared like beautiful landscapes, where rivers, streams, and rills of running water are everywhere dispersed.*" 7

According to the art historian Ewa Kuryluk in Mary Russo's book "The Female Grotesque", "*Dissection and surgery dis-organized the body into many possible systems and components, and the theatre of anatomy added the element of display, which set off the anatomical specimen as spectacle open to stylization (a comic or tragic scene of weird juxtapositions of parts).*" 8 Similarly to Stafford, Kuryluk describes these rooms as grotesque spaces: "*In the scientific grotto of the curiosities, the inside is turned outside and the dark secrets of the organic become disclosed as the bodily cave is opened up.*" 9

With the discovery of X-rays at the beginning of the the 20th century however, it was no longer necessary for the body to be dissected. The laboratory becomes a kind of ritual space in which the reconstitution of experience takes place. The accustomed body surfaces that define personhood are drawn back, revealing an "interior" that consists not of a person's inner emotional life but of a complex three-dimensional space. What we see is a systematized image, with its qualities preserved with the use of lines, vectors, geometric shapes, and colours. These visions are objective where the word 'emotion' no longer applies; "*There is a gap between our body consciousness and the tools used by medical practitioners to diagnose illness or abnormality. In a sense we are foreigners to our own bodies, as depicted by medical science.*" 10

Contemporary artists such as Sydney multimedia artist Justine Cooper, explores the notion of uncovering the hidden - to see what cannot ordinarily be seen. She engages with questions about what it is to have a body, to exist in physical space and to experience one's self internally with the aid of high tech medical technology. In her work "RAPT", Cooper uses MRI (Magnetic Resonance Imaging) to video herself, thus exploring the unseen interior of her inner body. Due to the constant motion of the camera the images portrayed are quite blurry and unrecognizable. In fact, it takes a while for the viewer to recognize that the images are actually the internal organs of the artist's body.

Robyn Donohue in her article "Photofile-Justine Cooper:RAPT" questions if Cooper is referring to "The ultimate view of a voyeur? or Foucault's 'Medical Gaze' turned in upon itself -.. "*internalizing not only the gaze but the institutionality of this particular technologically driven vision of the body?*" 11 She describes the artist's work as a hidden drama of the body whereby the viewer is floating in its interior; "*I sweep past the feet - time coalescing - this is another world within a body - decomposing and rebuilding - back to front, upside down, spinning. Disoriented, wrapped in images, RAPT wraps around my vision*" 12 The work is also accompanied by sound, which Robyn Donohue describes as "an aural hallucination". The sound is derived from Cooper's experience whilst being scanned, hence the pulsing and throbbing rhythms of the body's machinations accompanied by a deep metallic resonance.

French philosopher Michel Foucault in his book, "The Birth of the Clinic" talks about how the patient is turned into an object by the "medical gaze", thus deprived of his/her subjectivity. The word "gaze" is a technical term for Foucault. He calls it a "clinical gaze" at times, and an "observing gaze" at others. The people of modernity thought that with this gaze the physician/doctor could penetrate illusion and see through to the underlying reality. The anatomy lesson allowed the physician not only to "peer in" and image the unseen, but to "reach in" and probe at his own leisure. For the physician had the power to unveil the hidden truth of the human body.

Foucault says, *"The clinical gaze is not that of an intellectual eye that is able to perceive the unalterable purity of essences beneath phenomena. It is a gaze of the concrete sensibility, a gaze that travels from body to body, and whose trajectory is situated in the space of sensible manifestation. For the clinic, all truth is sensible truth."* 13

### The Theatre/The Spectacle

*"The metaphors present themselves repeatedly-dramaturgical and liturgical. There is always an element of the theatrical about modern medicine, ...something of the spectacular"* 14

The word 'Theatre' derives from the Greek word 'Theatron' meaning 'a place for seeing'. The surgical theatre and the theatre wherein plays are presented are not dissimilar. The players have tightly choreographed roles, each dependant on his/her cues to proceed with the next stage in the drama. There exists a hierarchy in the relationships of one player to another; lead actors play upstage from support actors, surgeons perform at the epicentre of activity supported by anaesthetists, nurses and orderlies. Lighting isolates the centre of focus and attention while props fulfill particular needs in both arenas.

During the 19th century deformed live bodies were paraded on stage in theatres full of people. Many of them were displayed in cages and stripped naked in front of large audiences. Among these were "siamese" twins, bearded ladies, dwarves juxtaposed with giants. As a group, these people were the subjects of the preoccupation with teratology, the study of "monsters", malformed human and deviant life forms. The objects of the gaze were often naked and defenceless. These events have often been referred to as the hysterics of the 19th Century wherein the doctors tried to induce hysterical episodes by speaking to them and touching them in certain ways.

James Elkins is an art historian and an author of numerous books on art, vision and perception in his book, "The Object Stares Back: On the Nature of Seeing", discusses a world that is not just there to be seen, but that responds to our glances by staring back.

*"The simplest objects can be the most unsettling because they remind us that the world is full of appropriations. Every object sees us; they are eyes growing on everything... To see is to be seen, and everything I see is like an eye, collecting my gaze, blinking, staring, focusing and reflecting, sending my look back to me."* 15

Elkins draws parallels between the pornography industry and these so called freak shows: *"...it involves people with clothes on observing people who are naked."* 16 Doctors and scientists however, rejected that these "freak shows" were purely for entertainment, instead claiming that public viewing was for educational purpose and furthered the interests of science.

19th-century American artist Thomas Eakin's painting "The Gross Clinic" (1875) depicts this clinical ruthlessness of the operating theatre. This well known portrait is of Doctor Samuel Gross performing a bone operation on a twelve year-old boy. It depicts the intensely dark psychological space of a surgical amphitheatre, where the "spectacle" is the centre of the eager gaze of medical students.

Barbara Stafford talks about the body as spectacle, during the time of enlightenment in her book "Good Looking" Mesmerism's sensational tactics found their way into the ocular theatrics of legitimate physicians and popular apparatus-driven experiments in science. The audience had become accustomed to the immediacy of the body as spectacle: *"Everything from nightmares to the barbarism of bullfighting to the ferocity of the Spanish Inquisition was laid at the doorstep of priestcraft holding an illiterate populace in thrall through a phantasmagorically 'delicious' spectacle"* 17

One of the key events in 1884 was the exhibition of John Merrick. Better known as the Elephant Man, who suffered from Proteus Syndrome, (a rare condition that deformed his face, head and limbs and caused his skin to hang in thick folds), Merrick had no skill to offer visitors; they came merely to gaze in horror at his "hideous" deformity. "The showman pulled back the curtain and revealed a bent figure crouching on a stool and covered by a brown blanket. In front of it, on a tripod, was a large brick heated by a Bunsen burner. Over this the creature huddled to warm itself. It never moved when the curtain was drawn back The figure was the embodiment of loneliness..." 18 When Merrick came to the attention of surgeon Frederick

Treves, he was quickly removed to a London hospital which was considered more humane, however he simply became a medical, rather than a commercial exhibit.

According to Stafford, scientists of the 18th century were as obsessed as scientists are today to uncover the hidden interior of the body. She believes that the Enlightenment, with its technological discoveries of autopsy, anatomy, optics, microscope etc., influenced contemporary scientific and artistic techniques and regards the period of Enlightenment as a forerunner to virtual environments and other high 'tech' visualization devices. 19

This brings us back to the contemporary medical institution of tele-presence and supermodernity where the probing eye of the surgeon has been replaced, or at the very least, supplemented by computer driven apparati.

#### The institution

French anthropologist Marc Auge refers to the Hospital as a non-place in his book, "Non-places: Introduction to an Anthropology of Supermodernity". Auge advances the hypothesis that supermodernity produces "non-places" which are, in the author's opinion, defined by the user's relationship to the place; in other words, "non-place" is an individual's trajectory through a place. The author explains that in supermodernity, traditional places are replaced by equally institutionalized non-places, a new architecture of transit and impermanence such as; airports, hotel chains, highways, hospitals etc. In Auge's opinion the non-place is a space which one may only inhabit temporarily; an environment of constant transition, a place to which nobody feels any special attachment. 20

*"The super modern place are the transitory we pass through, the airport, the hospital, the web site. They are filled with trajectories of futures and pasts but we don't stop there. The place could be there but it is not, because we are not looking for it, we don't wait for it, we don't care about it. People's dreams, wishes, pasts etc., everything that makes a place a place, a modern place, is there, but that is the only thing that is there..." 21*

Craig Kalpakjian is an American digital artist who has been a significant influence on my research. This artist has been working with the concept of non-places for many years through his high end computer renderings. In contrast to Justine Cooper whose works are generally highly saturated in colour and highly charged with human presence, Kalpakjian investigates the very opposite. To the viewer, his images of empty spaces are both alienating and inviting in that they are both sterile and seamless. These digital renderings question notions of safety, security, protection and vulnerability, confusing the viewer's sense of inside and outside. Kalpakjian's work ranges from quiet darkened windowless hallways that stretch into the distance to animated empty corridors and staircases that tend to trick the viewer by their soft lights falling around the corners. One cannot help wondering what remains hidden from view

"Corridor" 1995, is a computer generated animation which leads us on an infinite, unvarying journey through a photorealistically bland office corridor, the space is utterly devoid of any trace of human touch. Other than the fact that it never stops and never changes, it reminds me of that creepy, squeaky clean eeriness of a hospital corridor, conjuring a sense of claustrophobia and infinity at the same time. Kalpakjian creates a sense of dislocation or controlled dislocations by presenting images from impossible or totally ambiguous viewpoints. He uses the image of a mirror where a person's reflection or shadow should appear, but instead through computer manipulation, the object (the mirror) and the subject are completely dissolved into nothingness.

One may argue that the fascination and horror of the anatomical images of the Enlightenment have been substituted by a world without secrets, bodies without organs, naked flesh and its fragile potentiality crushed by commercial, popular, scientific and aesthetic pressures.

The image of the human body is created by means of computers and technology; it is translated into graphs and pixels-combination of colour and stripes and hypertexts.

I am questioning if the supermodern hospital milieu with its alienating computer driven apparati where nothing with any personal weight is ever established is less probing. The insignificance of the place functions to treat its patients as though they were bits of information to temporarily hold and then shuttle

off in a new direction. The reality of this however is that the probing eye of the contemporary clinical gaze is as invasive and horrific as that of the gaze in times gone by.

Dr Drew Leder states: *"The invention of the microscope, the magnifying glass, and the telescope invoke a desire to make the invisible visible, to peer into otherwise occluded spaces of interiority. Yet seeing is not necessarily knowing."* 22

#### NOTES:

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