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Microscopic / Telescopic (Universes unfold)

Melinda Capp and Daniel Armstrong
Micro and Tele Scoping the Technical Image
Written by Dr Dirk De Bruyn

In this exhibition Melinda Capp and Daniel Armstrong’s images harvest and scope the organic and cosmic forms available at the boundaries of our visible world. Their images communicate concepts more than phenomena, qualifying their art as examples of what Vilem Flusser identifies as ‘technical images’. (Flusser 2000: 14) For Flusser ‘technical images are meaningful surfaces. Created by programs, they are dependent on the laws of technology and the natural sciences’ (Ströhl 2004: xxiii).

For Flusser the digital or ‘technical image’ produces surfaces that resist history and their proliferation has resulted in a collective amnesia. (Flusser 2000: 10) We forget where they came from. He insists that the technical image’s inner workings must be laid bare: ‘as long as there is no way of engaging in such criticism of technical images, we shall remain illiterate.’ (Flusser 2000: 16) Capp and Armstrong’s images openly engage with their history. Their reflexive approach responds to Flusser’s call, allowing the viewer to unpack the history and technologies of the imagery constructed. These are critical works manufactured to deliver insights into our over-mediated technical environments.
One concept binding this collaboration together is morphogenesis, the study of pattern formation in biological forms, pioneered by mathematical biologist D’Arcy Wentworth Thompson’s 1915 text, *On Growth and Form*. Capp implicitly extends such patterning into the technological realm and Armstrong explicitly through his installation’s structure and form.

Both artists in dialogue creatively rematerialize Flusser’s ‘technical image’, appropriating abstract fractal structures, Mandelbrot sets, sourced from biological and celestial realms, real environments lying beyond the naked eye’s perpetual reach. Such spaces have been accessed historically through the microscope and telescope since the emergence of lens based technologies in the Seventeenth Century, during an earlier period of technological innovation. The earliest working telescope was noted in 1608, credited to spectacle lens-maker Hans Lippershey and in 1676 Anton Van Leeuwenhoek first viewed micro-organisms, ‘little beasties’ through his self-built microscopes.
Capp’s embossed images are incised with repetitive and modular embroidery technique, gleaned from what was considered a refined, fashionable feminine pursuit for previous generations, with a high-point in Victorian times of the mid to late 1800’s. She transforms such craft into a critical and reflexive digital practice, enacting a feminist inspired morphogenesis on technique itself.
Capp sources her fractal-like patterning from the skeletal structures of Radiolaria, a form of marine plankton. Their sizes range from hundredths to tenths of millimeters, while larger constellations or clusters may reach a centimeter in size. Their intricate mineral skeletal remains also carpet large portions of the seabed to become the organic pixel or grain of the ocean floor. This reminded me of a recently experienced large high definition digital image from the Hubble Telescope, on view at the Historic Sterrenwacht (Observatory) at Leiden University, Netherlands, its first observatory dating from 1633 and its current replacement from 1851. The dense, almost viscous interminable pinpoints of light peppering this image-field left its mark. At the moment of viewing it recalled the endless grain from which the analog photographic image is constructed but I also now understood that the digital can surpass the analog in detail. According to Lev Manovich it is such fields of grain and light that speak directly to the digital image’s nature which, he argues, through the pixel, is an essentially modular and mathematical artifact enabling automation and variability. (Manovich 2001: 27-48)
Armstrong’s exploration of outer space alludes to Capp’s Radiolaria through his fish-bowl like glass globes. These act as lens to the planetary images projected behind them, a strategy morphing and re-materializing the screened image. His use of glass and water adds a viscosity to the digital imagery of his screens, bringing back the corporeal experience of shine and transparency often lost to digital surfaces. As you move past his structures images slowly distort and metamorphose, a stellar meiosis of forms wedded more to movement than to time, re-asserting for me that the singular astronomical photographic image is as much a registry of time as space.
Armstrong’s tripodic structures talk to designed sea-life forms but also uncannily repeat the Russian Sputnik’s shape, the first man-made satellite (58 cm, 1957) to circumvent the earth. His transparent sculptures further remind me of the fortune-teller’s fogged psychic globe (crystallomancy), such crystal gazing offering a privileged door to a future truth. Art has its role to play in this, to creative conjure up the real in the ‘technical image’, when the photographed image no longer can be guaranteed, through its digital painterly and malleable form, to act as unerring witness to real events. This is not magic or divination but research grounded in an understanding of the technologies being used and transformed via a technological morphogenenis.

References


Melinda Capp

I am inspired by a world invisible to the human eye but made visible through the lens of a microscope. Sea plankton and other organisms with lace like structures, radial arms and repetitive patterns are the focus of my recent work, using the mediums of embossing, embroidery and mixed media. The circle is a constant shape in the works, denoting a point of viewing, through which the imagery is displayed (microscope lens and petri dish).

The artist’s book focuses on Radiolaria, (sea plankton) and is displayed as if looking through a microscope at delicate, beautiful and strange skeletal structures. What captivated me about Radiolaria was their fantastical architectural forms of silica, like floating glassy treasures, delicate and precious. I wanted to capture the beauty of these forms and give an ‘impression’ (using embossing) of their existence, of their minute presence in a bigger picture. I also wanted to juxtapose this quiet impression with a repetitive pattern (denoting patterns in biological forms), using the technique of embroidery (and also play on the notion of a ‘domestic craft’ using red thread as a connection point). Both processes are used to build up a trace of the skeletal forms through the raised surface of paper and small stitches of thread.
The mixed media work focuses on different kinds of cells (the work consists of petri dishes with sandblasted lids, acetate images, perspex and lights) and eludes to the notion of ‘the scientific’. Like the artists book, this work plays on the idea of processes, study of organisms and experimentation. Each dish houses the image of a cell/s that would (in a laboratory) be reproduced in a predetermined culture media within the petri dish. Lights sit behind each dish and project the image inside onto the sandblasted lid, creating an impression of something growing within, a receptacle of growth and discovery.

**Radiolaria 2013**
Mixed media artist’s book (BFK Rives 250gsm paper, Somerset 280gsm paper, red cotton thread)
Dimensions variable

**Cells 2013**
Mixed media (glass petri dishes, Perspex, acetate & lighting)
Dimensions variable
At the heart of our conception of the cosmos lies the lens and phenomena of magnification and refraction, the bending of light as it passes from one transparent medium to another. When I look directly through a telescope I have a sense of wonder in seeing for myself the sight of tiny celestial jewels sparkling in the night sky and or craters of the Moon rising from its surface, jagged and desolate. It is the very act of seeing through the lens which also lies at the heart of such observing - the experience of the optical and the ocular as one, as an embodied moment.

My work explores the relationships between the observer and the telescope and in doing so I have referenced historical observations such as those by Galileo Galilei who in 1610 turned his telescope to the Moon and Jupiter with its satellites and Percival Lowell’s (1895 – 1916) studies of Mars and his visions of its canals. Both these observers saw not only in response to the refracted light that bathed the retina of their eyes but also in response to what they brought to their seeing, persious knowledge’s and beliefs that profoundly influenced how they interpreted the celestial objects which held their gaze.
Aqua Optica 2013
Mixed media
(glass, water, timber, metal and digital image)
Dimensions variable

Exploring the refractive properties of a spherical aquatic lens as a signifier for all lenses and the experience of seeing that which lies beyond this work aims to invoke the physical and experiential nature of observation. The relative spatial positioning of the viewer to this aquatic lens gives rise to a fluxing and enlarging of light as image. This primitive optical instrument and the eye of the observer become entwined in a refractive dance.

Moon Drawings 2013
Mixed media
(glass, timber, acrylic sheet, lighting and digital image)
Dimensions variable

Throughout the history of astronomy and prior to photography, the visual records made by astronomers were mediated through the gestural markings of drawings and sketches while peering for long hours into the eyepiece and lenses of telescope. Moon Drawings employ the articulation of the body and the camera, hand-held and body mounted, with long exposures being used to record the pathways and convolutions of the corporeal and the celestial.
Solis Lucas (Oculus) The Eye of Mars 2013
Mixed media (glass, water, timber, metal and digital image)
Dimensions variable

Between 1895 and 1916 Percival Lowell dedicated himself to the study and mapping of Mars and its canals. His observations lead him to the conclusion that our nearest neighbors were engaged in constructing a global network of irrigation channels to counter the ravages of a global drought. From these drawings Lowell constructed a series of small detailed globes of Mars.

Solis Lucas, also known as Oculus or the Eye of Mars was the largest hub for these intersecting canals and Lowell believed that this was the location of a large Martian city. The tube references the 24” Clarke refractor telescope through which Percival Lowell made his observation. It is approximately ½ scale in length.
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“Globe of Mars (1907). Percival Lowell Collection, Lowell Observatory Archives”