Manifest de Stillare

MELINDA RACKHAM

PREMISE

Analogue anarchy. At first it appears that chaos rules in *The Microscope Project* space overlooking a leafy bend in the River Torrens. Here, almost a century ago, Faulding Pharmaceutical Company distilled eucalyptus oil, a variant on traditional indigenous medicine,[1] for use in many of its pharmaceutical and industrial products. Today it is part natural history museum, part *Terminator* spares factory – housing an autopsy of the electromechanical era.

Side by side, row upon row, sit a taxonomy of lenses, assortments of valves, carousels of multicoloured slides, empty film boxes, dislocated knobs, adrift switches. Goldplated specimens, some organic, some manufactured, are still waiting for reassignment. A sea of stainless steel, copper and alloy cylinders laps across the floor. Tomes of well-thumbed schematics and instruction manuals have come to rest in hospital grey cardboard boxes, albatrosses lazing on rocks.

The matt metallic skeleton of the Siemens ETEC Autoscan Scanning Electron Microscope, lifeblood drained, the thick grey green glass of its phosphorescent screen now blank. Strict interface diagrams are punctuated on occasion by red, orange and green buttons – the sort that light up importantly. Not even a flicker. Authoritative, no-nonsense white font once screamed VACUUM CONTROL… GAUGE EFFECT. Analogue commands still vaguely decipherable in a digital world.

Precision engineered and handbuilt in the early years of the 1970s, ETEC's guts are now exposed and vulnerable – twisted cable, disjointed hose intestines, coiled copper cooling pipes, silent circuit boards. A jaunty primrose and silver instrument, ex Weapons Research Microscope JEOL JSM-35 EP 156025-93 also has its innards scattered, washed up in piles, its back a cascade of truncated cables.

Other remains are of a younger generation – Olympus identical twins VANOX AHBT3. Like most literary twins, their stories are environmentally determined. One VANOX was dedicated to advanced fluorescence microscopy, resulting in groundbreaking research, while another VANOX came to Flinders University as spare parts – a frame and a few optical elements. Sheltered in safe harbour, an older LEITZ fluorescence microscope is preserved intact, and may yet be recalled into service.

So omnipotent that at first you don't notice, the microscopes' remains are nestled around, in fact dwarfed by, two giant hail cloud grey-green stomachs of eucalyptus oil stills. Engineered a century ago, these organic art nouveaux whales, are encrusted with massive convex rivets, their top and bottom sphincters screaming fire engine red. This is unexpected – the magnitude of materials, weight of embedded scientific history and complexity of imagery, all squeezed into the aptly named Distillery.

Affectionately known as the Still to its resident artists Angela Valamanesh, Catherine Truman, Deb Jones, Ian Gibbins and Nicholas Folland, all are aware that who and what enters these premises must emerge transformed. But is it even possible that a nuanced, cohesive aesthetic could manifest from random associations, recombinant couplings or unexpected triplings of a select few and a sea of machine parts?

This page and previous page: analogue anarchy at The Distillery, home of *The Microscope Project*
Photographs Catherine Truman

DISCIPLINE

These remains are not just any orphaned John and Jane Doe microscopes – they are retired Professor of Anatomy and Histology **Ian Gibbins**' deconstructed machine collaborators. Fond and valuable colleagues, some have gathered definitive data on the microscopic structure and function of autonomic and visceral sensory nerves. Each seemingly unimportant segment is imbued with a story of discovery, a nostalgic recollection, a construction of meaning.

The last of their electromechanical species – these machine assemblages facilitated assembled impressions of the otherwise invisible. Making the minute immense – an expansive virtual landscape to be explored step-by-step, micron-by-micron; they enabled the formulation of new questions. Scientific research is indeed a performative art, as through repetitive behaviours and choreographed movements, discovery and transformation happens.

As a poet and electronic musician Gibbins now practices a similar performative discipline. Adhering (mostly) to strategies like the 1960s French structured writing movement of Oulipo,[2] and contemporary concepts of Uncreative Writing,[3] Gibbins has taken original Microscope documentations, packing instructions and Control Panel texts, and applied constraints such as repetition, reordering and pattern to literally write the many poetic texts for *The Microscope Project*. I say mostly, as he also subscribes to the notion that any discipline is never hermetically sealed, nor any system infallible, but adaptable, fluid and open to contamination of ideas.

His *Thesaurus of Reconstructive Microscopy* wrote itself quickly. However it wasn't until the microscopes were laid out in the Still that the poetic and technical phrases began to find their corresponding objects. The VANOX twins started the process, then distant cousins and cleverly evolved relatives, some humble, some precious, appeared to complete the family over several weeks. *Thesaurus* wrestled uncomfortably with its physicality, eliciting empathy, until it found a suitable surface, fitting lighting and textual texture.

Constructing citational poetry, sampling natural language and using found text in other sequences, highlights language's ability to perform new possibilities. Literary critic Marjorie Perloff uses the term 'unoriginal genius'[4] to describe the post-analogue world where everyone is potentially an author. She also reminds us that for the past century, the concept and construction of a text is seen as equally important as its content. Uncreative and unoriginal writers, programmers perhaps, have replaced the traditional inspired genius.

Yet ironically, original signatures inspired *Autobiographies*. Gibbins observed that the pages of the ETEC Autoscan Schematics were signed or initialled by each contributor, then proceeded to extract data on each engineer or designer, their schematics and comments. The resultant sensitive and intriguing text creates parallel dialogues amongst the characters – interweaving their humanity with their profession; inviting creative collaborations with the other artists.

The JEOL JSM-35 in a state of disassemblage ????????
Photograph Catherine Truman

SEDUCE

In the closing pages of her PhD dissertation: *Under the Microscope: Making Art from Science*, **Angela Valamanesh** reiterates that the grouping of her work is a poetic arrangement 'equivalent to the individual words in a poem that unite to form a single piece of writing, where meaning is not always immediately grasped, but emerges slowly upon reflection'.[5]

Ambiguity and the potential for multiple meanings, explain her preference for the evocative drawings created from early optical microscopy, over the more revealing modern electron microscope imagery. Sparseness of visual data allows the artist and viewer greater latitude to create, embellish and interpret forms that may be animal, vegetable or mineral.

Valamanesh seeks the softness in the machine, prying open unseen places where metal precisely slides upon metal, to uncover a singular black rubber O-ring. Repeated over and over in the assemblages, this elegantly simple design enables the smooth, silent operation of sinuous silver-grey cylinders. Ranging from extra small to rather large, these cock rings for heavy metal, speak of machine vulnerability, the frisson of metal and rubber, an instrumental erotic.

Citing the influence and raw sexuality of 1960s minimalist icon Eva Hesse's organic forms, Valamanesh likes to make us wonder... Standing before *Loose Ends*, her grouping of pert wax machinic breasts, assailed by sprouting black cords, curious nodules, O-rings evolving into corkscrew tangles and tumbling rubber filaments demanding to be touched, I do wonder. Are they venous extrusions, mutant growths or energetic conduits? Perhaps, at the flip of a switch, they will pulse, jerk and swish to send shivers up the spinal cord. Certainly sassy, they are an instrument-induced departure from her usually more sedate yet equally sensual ceramics.

O-rings ????????
Photograph Ian Gibbins????

So too is *Gravity* – a series of found objects, dripping with sexual innuendo and an intention beyond formalism. Polished metal creatures stand erect, still pristine after four decades, some pooled by viscous blood-red ooze. The life-force of the machine seeps out in dis-assemblage, coagulating with slide specimens and the last traces of the dissected. The weighty machine and the fragility of flesh – a fitting memoriam for the creatures who have died in the service of science.

The found object, the *objet trouvé*, is inevitable in *The Microscope Project*. Unplugged, disassembled machines provide an abundance of form, texture, precisely engineered precious components. Seducing us with their elegant functionality, in surrealist style these objects excite a passionate response. Each found object, part of a great whole, is a metaphoric poetic fragment, augmenting meaning with many layers.

This coalescence of the stark, the soft and the suggestive are poetic, visceral compositions that engender a shudder of excitement – a machine scopophilia. By embracing the potential of others to see meaning in her work that she may not have consciously intended, Valamanesh allows us to derive pleasure from looking.

CONSTRUCT

Deb Jones relishes 'that glass has a depth you can't touch'.[6] A whisperer of matter, she works with the inherent qualities of materials across many disciplines. An affinity with objects and love of their physicality allow her to differentiate myriad machine parts in the Sea of Still by their unique shades of grey. She likes their silence. And they like her.

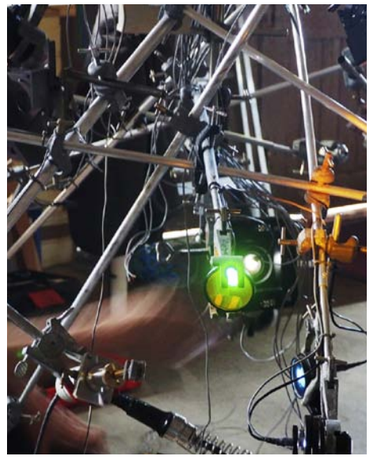
A taxonomy of sorts emerges in the Still as the artists classify like objects, useful objects and aesthetic objects. It may be an unlikely metaphor to describe our five highly esteemed artists as carrion picking over the remains of the vanquished or as a swarming multitude of Third World workers disassembling a monolithic rusting iron ship. Their objectives however are the same: sorting value from waste; the interesting from the ordinary; the sentimental from the detached; recycling/upcycling another era's surpassed achievements.

Next time I visit, the Stillscape has again changed. I look for my favourite pieces and discover some have relocated to artists' home studios for experimentation, while others have been reclassified under a genus I am unfamiliar with. Families of lenses, many from the VANOX twins, perhaps the most precious organs of the machines of perception, are gathered around Jones. Literally as valuable as rare jewels, some circular, convex and precise; while other oddly-shaped 3D forms are painted orange and gunmetal grey on several surfaces.

Realising an almost impossible concept, the precious machine eyes, move from her careful hands to the firm claws of lab clamps. Disembodied lenses and forgotten glass slides have reassembled into an orbital construct – part chandelier, part disco mirror ball, part exploding high-tech space junk. Hoisted and hovering just above the floor of the Still, I want to name its Russian Constructivist aesthetic *Sputnik*.

For Jones 'art is not enough'. Learning early as a glassblower that working alone could be very limiting she is a natural collaborator. Slipping easily between concept and construction, she highly values cross-pollination between people, practices, knowledge and lateral ideas. Around her the discarded transforms via artistic sensibility and technical excellence. Unremarkable metal film lights with new finely etched glass faces become *Circuit-lamps* – desirable and collectable; engraved ETEC command panels mimic their aged relatives; glass tubes twist into clever conundrums, indistinguishable from precision engineered machine innards.

Jones too has a depth we cannot touch, bubbling above and calmly flowing below. Drawing into surfaces while maintaining core integrity enables a different seeing into, an oblique window, a looking glass, glimpsing one's own faint reflection, dappled by delicate shadows. With a wider focus than the individual aesthetic of objects, her perspective changing presence is central to the creative dynamic of collaboratively re/constructing the invisible – always a poetic fragment at the ready: 'we are present links in the endless chain of cause and effect.'[7]



Clamps and other parts of *Chandelier* ????????
Photograph Catherine Truman

TRANSMUTE

With a Duchampian determination not to be seduced by the pleasure of elegant precision and rich metallic machine parts, **Nicholas Folland** is set on transforming them into other objects. He shares his vision of molten copper and alloy machine innards emerging from the alchemical furnace – recast as rolled microscope instruction manuals. Held to the eye they become telescopes, evocative of the scientist searching for answers; the child playing at pirates; the artist envisioning beauty, the researcher observing at a distance; the author contemplating meaning; or the explorer surveying uncharted terrain.

ETEC and JEOL were conceived in the years immediately after the height of modernism and human expansionism. *On a July afternoon, he saw a man named Armstrong, walk upon the moon…*[8] Neil Armstrong, the less remembered Buzz Aldrin and almost forgotten Michael Collins, were delivered to the moon in 1969 by Apollo 11. In reality 400,000 people – engineers, seamstresses, programmers, designers, directly enabled that moonwalk. Over half a century later our perception of the noble, romantic, isolated explorer bravely and objectively venturing into the unknown has shifted to nostalgia and sentimentality.

The irony in this playfulness is that the telescopes would be self-reflexive – a myriad of inwards reflections flashing back at us as we spy self-contained and ever-changing kaleidoscopic patterns. Unfortunately they don't eventuate for technical reasons, however their conception advances the collective dialogue of artworks. As time lapses in the Still, Folland selects and arranges heavy metal chambers, instrument innards and disassembled refrigerant systems, appraising their capacity to connect and trialling multiple combinations, before disappearing them to his home studio.

Reassembled, repurposed and reverse engineered, they collectively resurface as an actual working still. Yes. One that distills alcohol. Folland values exactitude and this tightly engineered apparatus exhibits, along with its unexpected purpose, an unexpected back shed cobbled-together beauty. Almost steam-punked, the contrivance of precision parts, elaborate coils and precarious couplings are offset by the hefty counterbalance of JEOL JSM-35.

NICHOLAS FOLLAND
Popular science – still (detail), 2014
reclaimed microscope parts, dimensions variable
Photograph Nicholas Folland

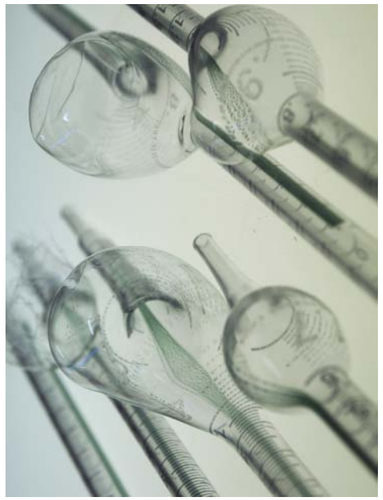
What used to cool the machine now heats the blood as its imbibed essences loosen strictures and sphincters. *Popular science – still* is and is not a discrete object. More a lively theatrical set and entwined narrative, in communication with the machines it has evolved from, and their other artwork offspring, all inviting human interaction. Together, through alchemical fire, they distill the weighty matters of science, art and philosophy.

A river runs through Folland's *oeuvre* – a living fluid core – sometimes frozen, sometimes molten, sometimes gaseous; overflowing with excess or cut deep into crystal. Flowing across the oceanic Still, washing around and gushing through these now archaic instruments of perception, it is transmuted into intoxicating fluid, and released, one playful drop at a time, onto our parched sensibilities.

AFFECT

Catherine Truman observes. She observes closely and with curiosity – immersing herself in the discipline of inquiry to more readily absorb and understand it. For *The Microscope Project* she has embedded herself within the machine disassembly – setting up a discrete studio within the Still – slightly apart from, but right next to the action. Full of early morning light, it is a place to play and formulate; a retreat of relative order amongst the machine archaeology; an evening cocoon to review and contemplate.

This changing studio light is integral to her *Transparency Studies*, an intimate scrutiny of life at the cellular level. More enquiries or laboratory notes than finished objects, they document the process of grappling with the invisible structures of the not-known. Precision pipettes are blown out of shape to become schools of tiny deep-sea fish, bellies engorged, swimming on lightboxes. Glass beads ('extremely rare glass beads' I read on the jar label) cling to other instruments, sticky spawn of invisible worlds. Red stone platelets ribbon and curl for no particular reason.



CATHERINE TRUMAN

Transparency Study: Pipette Light (work in progress), 2014
heat formed plastic pipettes, largest dimension 30 cm
Photograph Catherine Truman

Repeated acts of making are, like scientific experimentation, performative. Repetitive behaviour and choreographed movement enable innate learning and the transformation of raw materials into tangible concepts. The programmer/hacker used to be the woman who entered the code into the computer – but does the machine now program the body of the human user/viewer/researcher to serve the needs of its production?

Connections between movement and cognition – from handmaking an object to observing the preparations of a laboratory, have fascinated Truman for many years. Having worked on research projects alongside Gibbins since 2007, she has become keenly aware that 'hands provide a bridge between theory (written and spoken) and a spatial, structural and functional understanding of the body'.[9]

Truman inserts the complexity of the human hand in the form of *Sensate Gloves* – laboratory gloves augmented by myriad sea urchin-like flexible extensions. As her sinuous spikes seek to caress many machine parts simultaneously, Truman encounters a verge, an energetic space between (human and machine) which she describes as '…a space that exists between boundaries of what is and what isn't. The space that exists… just before touch'. Like the fission generated by close proximity to a new lover, there is potent co-presence in being with our instruments.

The majority of *The Microscope Project* works – creative dialogues between Jones, Gibbins and Truman – show traces of her collaborative hand. Hands turn transparent compendium pages, distorting the poetics of *How Things Work*. Hands slowly turn the fragile pages of ETEC's *Schematic Manual* in the mesmeric 60-minute *Autoscan/Page Turning*. The hands almost imperceptibly change human owners several times over the video's duration. Yet each has a unique signature, a distinctive chorography, echoing the individually signed pages, blueprints for a unique analogue era machine assemblage.

DISPLAY

Blurring the scientifically authentic with artistic interpretation and collaborative intervention, the complete *Thesaurus of Reconstructive Microscopy* lines the length of the gallery, a visually grand benchmark informing the entire exhibition. Hanging centrally is the opulent orbital artwork now known as *Chandelier*. At one revolution per minute, with slight vibration, *Chandelier* reveals slowly shifting subtle relationships. It illuminates – not the minute; but reflects into the gallery pinpointing connections between people, machine artefacts, art objects, sounds and texts.

Transformation has occurred – seepage and cross-contamination between artists, genres and bodies of work. Texts responsively tauten. Compendiums lay out, are swarmed, edited, contemplated, reshuffled, tweaked, designed and printed. Carousel slides selected through intuitive decision and random association. Moods made with experimental music, seating sorted in *The Microscopist's Light Lounge*.

On close examination of ETEC sitting starkly in the gallery, it appears boundaries have been breached. Fonts have been cloned; commands have been repeated, reprinted, resequenced. Poetic texts etched into the machine, *Autoscan/Spares* modules make the invisible interior visible; gold-plated specimens sit proudly with renewed purpose; daydreams surface through the surprising ambiguity of machine language.

Re-understanding the nature of perception occurs through creative recontextualisation, recombination and reiteration. This experimental science and art project is necessarily cooperative and collaborative. Authorship – whether the artist has created objects, images or texts singularly or in collaboration with others, must philosophically be shared. Citation becomes an expansive project incorporating artists, building, curator, technicians, gallery staff, original engineers, essayist, designer… et al.

CATHERINE TRUMAN and DEB JONES

Citizen Scopes (Concretescope), 2014
....., mirror, video, 38 x 26 x 26 cm??
Photograph Grant Hancock

A suite of sculptural concrete, wood, plastic and metal *Citizen Scopes*, enable other shifts in seeing, challenging our assumptions and altering our bodily relationship to the act of looking. Eyepieces, that reflect one's own image back as a one-eyed creature, relay a cautionary mythological tale. Looking down to see the miniscule, we experience expansive skies and unexpected stormy oceans, vast ever-changing worlds within… or we are confronted with what may actually be down there – our feet on the ground.

Perhaps most emotionally nuanced and sensitively articulated is *Autoscan/Autobiographies*. There is such humanity in the constructed biographic photographs that capture the essence of ETEC's designers. Polaroid-size photos clipped casually to data cards containing their names and comments, may be all that remains of another era's engineers. Depicted mostly alone, dwarfed by the unknown of 3D terrains and windswept voids – these intrepid explorers are observed as if under their own microscopic lens.

PROOF

Seeing is a collaboration – an intimate choreography of reflection and refraction between a group, and between an instrument and its user. Wandering into the Still, almost drowning in the sea of disassembled microscopes, I have been carried along on a simultaneously submersive and expansive current. Witnessing this responsive collaborative process of conception and making, the resultant connections and cohesion between finished objects are all the more elegant and evocative. The personalities, calibre and skill-sets of the artists create a dynamic dialogue that continues in this compendium and into the gallery.

By disassembling our instrumental eyes, we can look more closely at how we construct and code the unknown under glass – at once held apart and allowing closer examination. As we gaze into these oceanic vitrines, how can we be sure that what seems to be a transparent magnification is not distorted, curved or looped? With sequences to note, surfaces to trace, terrains to chart, depths to plumb and narratives to decode, papers to write, this deconstruction gives us time to contemplate our underlying assumptions.

Did we find an indicator? Will sensation augment reason while reading playful instructional texts on retro machine interfaces, peering into vast landscapes, pondering the lives of the builders or basking in the shadows of etched circuitry? Does drinking essence distilled through repurposed precision parts enable a more fluid thinking? Is contemplating machine desire unethical? Will dancing under the giant disco lenses to synthesised sounds unbalance our objectivity? Does inner reflection reveal a greater whole?

Science and art are always tethered between ambition and constraint, premise and proof. Five artists have stripped back layers of cultural assemblage to open up the space of unknowing, a space filled with awe, to reveal both a mutual vision of possibilities and a profusion of new questions. The diversity, humanity, sexuality, humour and discipline of *The Microscope Project* pay fitting tribute to the mighty ETEC, world-famous VANOX and its amnesiac twin, lucky LEITZ and dear old jaunty JEOL. I honour them and their human collaborators, and look forward to their next iterations.

Endnotes

1 Aboriginal people in Australia used and use eucalyptus leaf infusions (containing eucalyptus oil) as a traditional medicine for treating body pains, sinus congestion, fever and colds.

2 Oulipo is short for *Ouvroir de littérature potentielle* – or *workshop of potential literature*.

3 Goldsmith, Kenneth. *Uncreative Writing: Managing Language in the Digital Age*. New York: Columbia University Press, 2011.

4 Perloff, Marjorie. *Unoriginal Genius: Poetry by Other Means in the New Century*. Chicago: University of Chicago Press, 2010.

5 Valamanesh, Angela. *Under the Microscope: Making Art from Science*. Adelaide: University of South Australia, 2011, p 91.

6 Quote from Deb Jones in Anne McMahon, 'Deb Jones: Enterprise and Multi-skilling', *Craft*, 25 March 2010. http://www.craft.org.au/Learn/Craft_Culture/deb-jones-enterprise-multi-skilling

7 Curle, J H. *The Shadow-Show*. 1920. Reprint. London: Forgotten Books, 2013.

8 Lindsay, Reg. *Armstrong*, (John Stewart, 1970). Single, 1971.

9 Truman, Catherine. 'Evidence of touch', *ANAT Synapse Residency Blog*, 22 June 2011. http://truman2011.anat.org.au

Vaccuum gauge ????????
Photograph Ian Gibbins