

Curse of The Walking Techbane

Mathew Kneebone

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If our understanding of complex technology as end-users is inadequate then how do we respond to its malfunction? When faced with a meandering cell-phone signal we might desperately wave our phone in the air to improve reception. We might blame a rainy day for unstable Wi-Fi, or perhaps a passerby for blocking its invisible path. The language we use to describe these occurrences suddenly imbues machines with a temperamental personality: drained batteries will suddenly “die”, an erratic phone becomes “possessed”, and a touch screen responds *crazily*. How might an engineer respond to malfunction by comparison? In his book *Overcomplicated: Technology at the Limits of Comprehension* (2016), complexity scientist *Samuel Arbesman* talks about how technical systems such as infrastructure and computers have reached such a point of complexity that no single individual, either engineer or end-user, can claim full understanding. Supplanting the notion of the engineer as contemporary magician *Arbesman* says that the projection of meaning onto malfunction is “no longer an attitude reserved for laypeople, it occurs even among the developers of technology themselves.” He continues with an anecdote told by engineer *Lee Felsenstein* in which an engineering manager had to leave the room whenever a piece of software was being demonstrated; his presence alone seemingly caused things to malfunction. None of the engineers could find a logical solution to the problem and so instead resigned it to the realm of metaphysics.

For *Curse of The Walking Techbane* at *Rib*, *Mathew Kneebone* explores the metaphysical meanings attributed to malfunction and technical complexity. Works on show link human energy fields, magnetism, and auras with machines through video loops of homopolar motors, troubleshooting monologues, electro-photograms, 19th-century aura viewing fluids, dysfunctional prototypes, and musical lights.

With voice work performed by *Abe Bernstein*, *Lisa Sniderman*, *Brian Vouglas*, and *Susannah Wood*.

Mathew Kneebone (1982) lives and works in San Francisco, California. He graduated from the Werkplaats Typografie in 2014 and in the same year was a resident at the Jan van Eyck Academie, the Netherlands. He explores the history of electrical innovation and the cultural mechanisms that end-users adopt to cope with its change. His research correlates technical-complexity, malfunction, and user-anxieties with mythology, superstition, and science fiction. This manifests through writing and drawing which informs the creation of his electronic installations and performances. He has given talks and workshops at the AA School, London UK (2011); Central Saint Martins, London UK (2016); Kunstverein, Amsterdam NL (2015); Sandberg Instituut, Amsterdam NL (2015); and has recently shown work at De Fabriek, Eindhoven, NL (2017); Museum Dr. Guislain, BE (2017); Sitterwerk, St. Gallen, CH (2016); Typoanchi Biennial, Seoul, KR (2015–2016). His writing has been published in *The Serving Library*, *OASE Journal for Architecture*, and *Luca School of Art* amongst others.

Seeing Clearly (2018) *Recreation of the Kilner Lens*

There are many kinds of instruments for detecting magnetic fields. Magnetism produced by the central nervous system can be measured by a finely tuned magnetometer such as the Superconducting *Quantum Interface Design*, or *SQUID* for short. And while the electronic *SQUID* is used by scientists to identify otherwise ephemeral magnetic fields, living animals also share this ability. *Animal magnetism* is a term coined by the 18th-century German doctor *Franz Friedrich Anton Mesmer* to describe what he believed to be an invisible natural force employed by animals. Today it is thought that birds orient themselves by their ability to sense the Earth's magnetic poles. The beak of a homing pigeon, for instance, behaves similar to a compass due to tiny magnetite receptors which are sensitive to subtle changes in magnetic fields. Although yet to be proven, some scientists believe we also have an evolved sense of direction derived from a chemical in our eyes.

The hypothesis that magnetic fields are bound to a human life-force flourished during the *Spiritualist Movement* in 19th-century America. Some spiritualists believed that the human body projected an invisible magnetic fluid which was only visible to clairvoyants (derived from the French 'seeing clearly') who drew inferences as to the emotional and spiritual state of a person from observing their magnetic fluid, or aura. A personal disease or imbalance, for example, would be reflected in the colour palette and enervation of the subject's energy field.

Fringe scientists involved in the movement invented optical instruments specifically for revealing auras. *Walter John Kilner*, a London based medical electrician, was one of the first to build such an instrument. He believed that the aura, as described by clairvoyants, was actually ultra-violet light produced by the body. To prove his theory, he constructed an experiment by sandwiching together coloured glass lenses *Kilner Screens* that were pasted with a concoction of chemicals and dyes. Curiously, the active chemicals described by *Kilner* at the time *Dicyanine A* is the equivalent to *Pinacyanol Iodide* which is used in the production of certain photochemistry (by *Ilford*), holography, and CD fabrication.

By wearing the lenses in a dimly lit room, he claimed that any untrained person could see the light surrounding a body. In 1911 he published the findings in his book *The Human Atmosphere, or the Aura Made Visible by Aid of Chemical Screens* which was later renounced by fellow scientists who specialised in optics. Contrary to *Kilner's* report, the glow perceived through the lenses was not light emanating from an observed subject, but the observer's own optical aberrations. Despite such conclusions, *Kilner* goggles were marketed in esoteric publications up until the 1970s.

A side note: There are also links that can be made, I think, to experiments like this during the late 19th and early 20th century and stories by *HP Lovecraft*. In particular *From Beyond* (1920) comes to mind, where a scientist has created a machine to awaken dormant human senses for viewing a strange world normally invisible to our five senses.

A Small Black Cloud Looking Substance (2018) *Ongoing series of electro-photograms*

Compared with *Kilner Screens*, *Kirlian* photography is a somewhat more contemporary attempt to reveal the human aura. Russian inventors *Semyon* and *Valentina Kirlian* stumbled upon the method in 1939 after repairing a high voltage machine in their lab. A spark suddenly jumped between the machine and *Semyon's* hand which led him to wonder what would happen if a sheet of photo-sensitive material were placed in the spark's path. The process works as follows: the subject places their hand onto photo-sensitive paper which is laid on top of a glass sheet. Laid underneath the glass is a copper plate which is electrified. The natural resistance from the subject's hand produces an electrical discharge and therefore photographically exposes the paper. The inventor's claimed that the resulting images were in fact a recording of the human aura, a theory which was popularised through new-age books such as *Psychic Discoveries Behind the Iron Curtain* (*Ostrander & Schroeder, 1970*).

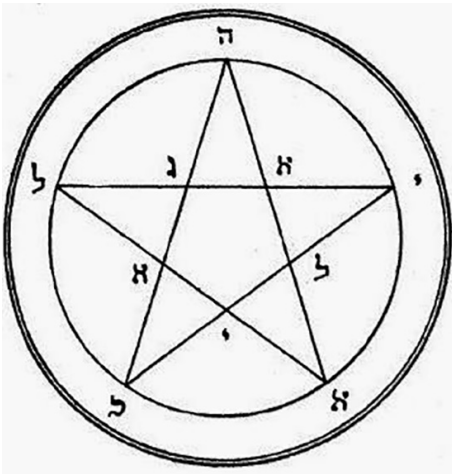
Western medicine briefly dabbled in *Kirlian* photography up until the 1970s. It was used to diagnose cancer and other physical ailments which were thought to be indicated by diminished discharge surrounding the subject. The device was finally dropped from use when it was determined that the images were too sporadic to serve quantifiable science; environmental factors including the humidity or how sweaty a subject is, strongly influences the exposed image. It is partly because of the subjective nature of *Kirlian* photography that it remains a new-age tool for reading spiritual and mental well-being.

For this series *Kneebone* has been creating *Kirlian* images from gemstones and minerals which have a history with both meta-physics and electronic production. Some of the minerals—like lodestone—are sold for their protection against electronic signals (*EMF*) but also has a very important history in the scientific discovery of magnetism; *Quartz* crystal (used in crystal oscillators) is believed to also clear stagnant energy; pyrite is said to protect from lightning and was used in crystal radio sets, etc.

Kneebone used the common element—electricity—to conflate the two often paradoxical functions into an image (electronics, and protection from electronics). The title is in reference to a line spoken by one of the characters who describes a vision of a demon entering her phone as a dark black cloud looking substance.

Personal Magnetism (2018) *Ongoing series of video loops*

The accompanying videos are a series of loops which serve as abstract visual representations of each voice/person in the audio recordings. Each video is of a homopolar motor (homo/man + polar/opposing physical properties) which consists of an AA battery connected to a neodymium magnet and copper wire. The wire spins in circles once connected to the negative terminal/magnet and the positive terminal of the battery. The starting point for the series comes from my research of alchemical seals and in particular the famous pentagram symbol for *magnetism* found in the Lesser *Solomon Keys*; the meaning of the pentagram symbol has shifted from personal magnetism/attraction to being associated with generic devil worship and possession. As a *Techbane* is someone who believes that they are cursed with technology, attributing their magnetic field to technical issues, the spinning homopolar motor is a type of incantation of that curse.



Above: "Personal Magnetism" from *Goetia: The Lesser Key of Solomon*

Each wire shape in the videos are formal deconstructions of the pentagram seal designed to relate specifically to each character's persona in the audio works. The lighting used in the videos are derived from aura/chakra colour theory which is typically used to match a person's energy field with their state of mind. The colour theory has been absorbed into mainstream culture and is fairly well understood by most people. Shades of red = aggression, passion; shades of green = nervousness, self-pity, envy; light blue = fear; lavender = mystical, day-dreaming/visions etc. The speed and fluidity of the rotation also reflects the qualities in the voice, slow for dream-like, fast for frantic and nervous.

Singing Light series (2015–ongoing)

The Singing Light series of sculptures is based on a recreation of a late 19th-century discovery by English physicist *William Duddell*.

During the late 19th century electric light was predominantly street lighting which used a carbon arc as a light source. One common, and unwanted, byproduct of carbon arc lighting was that it produced a resonant buzzing sound—much like the sound of a dying fluorescent tube—that would emanate from the electrodes. In the late 1890s *William Duddell* was asked by his professor *William Ayrton* to uncover the cause of the issue.

The spark is otherwise called plasma and is a form of electrical gas discharge that occurs at unimaginably hot temperatures. Lightning bolts are the form of plasma that we're most familiar with. In the case of lightning—which is a gigantic static spark—the air surrounding the electric charge is, in a flash, heated to temperatures hotter than the sun. This heat causes the air to rapidly expand to create the boom of a thunderclap.

Duddell reconstructed a lamp in his laboratory and discovered that it produced a similar effect to lightning only at a much smaller scale. Because the static discharge was constant, then the air surrounding the spark would heat up and oscillate to produce sound waves. To demonstrate his discovery, *Duddell* connected a keyboard to the lamp as an audio input and in a nationalistic public performance played *God Save The Queen*.

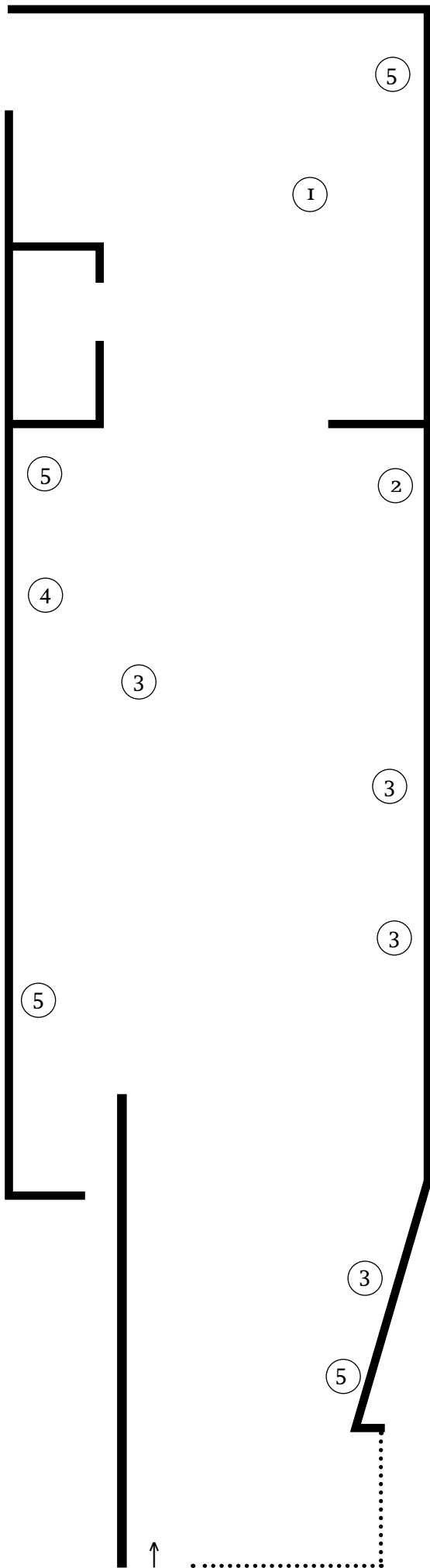
Although there were other experiments with electronic sound production being developed around the same time, such as the *Telharmonium*, *Duddell's Singing Arc* discovery is by and large considered the first example of electrically produced music. It's not implausible to think then that through this demonstration, a broken light was responsible modern day sound production.

Kneebone's recreations of the light are made in homage to electric sound discoveries and are dedicated to playing a kind of historical overview of electronically produced sound effects used in science fiction and the avant-garde.

Techbane Monologues (2018)
Ongoing series of audio loops

Kneebone has been collecting technical issues that were posted on support websites—such as *Apple* and *Android* support—where paranormal keywords have been used in either the title of the post or the description of the problem. From the language used in the collection he then composed different personalities relating to *Techbane* phenomena and horror character tropes. Each paragraph from the script denotes a separate issue found online, but when edited and spoken from a single voice, the disparate problems form a seamless description of someone with an endless technical issue—with a device seemingly from hell. Some of the descriptions are very cold and technical but others are more metaphysical, these are conflated in the recording. *Kneebone* used actors local to *San Francisco* to perform the work based on his creation of the personalities in the script; the direction he gave referred to absurdist theatre and other dramatic styles.

As each character is trapped or cursed with malfunctioning technology—in this case a smartphone—there isn't a beginning or end to the audio pieces, rather the recording is designed to be played as an endless loop; a perpetual curse. *Kneebone* has found that people are more likely to use paranormal terms when describing issues with touch screen devices because—amongst many other examples—the touchscreen relies on our body's electrical conductivity to function correctly. When the body is removed and it operates on its own, then it either appears to be possessed or that a nearby energy is manipulating it.



Exhibition Floorplan

Curse of The Walking Techbane

- 1 Seeing Clearly (2018)
Recreation of the Kilner Lens
- 2 A Small Black Cloud Looking Substance (2018)
Ongoing series of electro-photograms
- 3 Personal Magnetism (2018)
Ongoing series of video loops
- 4 Singing Light series (2015–ongoing)
- 5 Techbane Monologues (2018)
Ongoing series of audio loops

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