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The Electro-mystical Machines of Lovecraft and Pynchon

ABSTRACT

*This article will examine how two key literary texts have shaped and interrogated the line between technology and what could be termed mystical thinking or the occult. Although apparently disparate, Thomas Pynchon's 1966 *The Crying of Lot 49* and H.P. Lovecraft's 1920 'From Beyond' have something in common aside from their status as cult classics: both involve machines imbued with mystical powers. Lovecraft's machine is evidently inspired by the ideas of physicist and Spiritualist William Crookes and incorporates the concept of sympathetic vibrations whereas Pynchon's 'electro-mysticism,' a term discussed by media theorist Friedrich Kittler, draws from physicist James Clerk Maxwell's thought experiment known as 'Maxwell's Demon.' An examination of the machines in these two novels reveals a crossing-over of science and the occult through technology that has emerged time and again in popular culture.*

KEYWORDS

Thomas Pynchon
H.P. Lovecraft
James Clerk Maxwell
William Crookes
electro-mysticism
sympathetic vibration
telepathy

INTRODUCTION

Although disparate in style and eras, both H.P. Lovecraft's 1920 short story 'From Beyond' and Thomas Pynchon's 1966 novella *The Crying of Lot 49* involve science and the occult and both contain machines imbued with mystical powers.¹ In Lovecraft's tale, written in his characteristic embellished style, the protagonist goes to visit his friend Crawford Tillinghast whom he discovers has taken his studies of science and philosophy a little too far, having invented a machine that is capable of revealing the occulted – that is, hidden (and evidently occult) - world surrounding him to disastrous effect. Like many of Lovecraft's characters that dabble in the occult Tillinghast has descended into madness.

In Pynchon's *The Crying of Lot 49* the protagonist, Oedipa Maas, on the trail of a clandestine mail service, meets a bizarre assortment of characters including Stanley Koteks, an engineer at the somewhat cultish Yoyodyne Corporation.² Koteks informs Oedipa of John Nefastsis, the inventor of the Nefastsis Box, a device that supposedly uses an 'honest-to-God' Maxwell's Demon to create perpetual motion.³ The Demon can only be conjured into action by a 'Sensitive' using telekinesis.⁴ Oedipa goes to try out her paranormal powers (to little success). In this article, through an engagement with the writings of Friedrich Kittler and Terry Reilly and Stephen Tomaske I will endeavour to examine how these two key literary texts have shaped and interrogated the line between science, technology and what could be termed mystical thinking or the occult.⁵

The incorporation of scientific ideas popular at the times that these works were written into the context of horror and science fiction texts allows for not only the transgression of the borders of science and the occult but also speculation around the very nature of our perceived reality. Pynchon overlays the methods of Helmut Schmidt's paranormal (Boeing) laboratory experiments and their associated vocabulary and electronics diagrams not only onto his plot structures but also onto characters themselves.⁶ Thus technology and scientific phenomena are anthropomorphised and animated in a way that corresponds to occult (and pre-scientific) lines of thinking. This atypical juxtaposition in fiction allows for an unusual parallel to be drawn between the behaviours of electronics and humans, one which could not be drawn easily in either the fields of science or psychology alone and which further blurs the line between science and the occult.

These two fictional texts are used as a type of testing ground for the idea that occulted phenomena and occult worlds could be activated using technology. Fictional literature is a space here where seemingly radical connections between the fields of science, technology and the occult are proposed. However, these connections were already extant in both the times of Lovecraft and Pynchon. Examples include new technologies such as x-rays and their seemingly magical ability to reveal the unseen as well as paranormal phenomena such as telepathy and the paranormal-edged experiments of Helmut Schmidt at Boeing labs in late 1960s California.⁷ Lovecraft's integration of what appears to be a Crookes Tube and its incumbent apparatus into his horror fiction positions technology directly within the occult by giving the machine itself occult powers and embellishes upon this already existing relationship of the occult and technology. Both Lovecraft and Pynchon's texts suggest that there is an underlying layer to reality, a reality just outside the realms of our perception, that

can be revealed through technology.

A BRIDGE BETWEEN MATERIAL AND THE IMMATERIAL WORLDS

In this paper, ‘occult’ and ‘occulted’ are employed as specifically different terms: the occult as unseen or hidden knowledge in the realm of the supernatural and the occulted as relating to the unseen and hidden phenomena of the natural world, such as the forces of electricity, radio and other resonant electromagnetic emanations. In the narratives of Pynchon and Lovecraft, the occult and the occulted are explored in tandem, through the unseen monstrous life forms that are exposed in Lovecraft and in Pynchon’s combination of the paranormal phenomena of telekinesis with Maxwell’s Demon.

A major difference between science and the occult or the metaphysical are their materialist and occult outlooks, respectively: the tangible (measurable, material) and the intangible (immeasurable, immaterial) – yet both, whether through the study of electromagnetism or communion with the spirit world, deal with the unseen, the occult(ed). Certain occult practices (such as telepathy or mediumship), it is claimed, are able to connect the tangible with the intangible, unseen world – our dimension with the occulted or spirit dimension – channelling messages from the beyond.

Science in the late nineteenth and early twentieth Centuries appeared increasingly to support the idea that unseen forces were at work around us - the (invisible) electromagnetic radiation of the x-ray revealed the previously occulted world of the inner body and radio waves and electricity surged through the atmosphere. During this period there were often analogies drawn between psychic or occult phenomena and communications technologies. The ability of the radio and television to transmit messages via apparently invisible means seemed to suggest that phenomena such as thought transmission (telepathy or clairvoyance) might also be possible. As Iwan Rhys Morus observes, ‘[e]lectricity had already produced wonders – why should it not turn out to be a way of communicating with another world?’⁸ It was this seemingly magical ability of electricity and other occulted energies to transmit information (signals) and move objects (as in magnetism) that endowed it with seemingly supernatural properties. The electric telegraph was described in 1854 as ‘a spirit like Ariel to carry our thought with the speed of thought to the uttermost ends of the earth.’⁹

In thinking about this link between science, technology and occult, Anthony Enns and Shelley Trower observe in their introduction to *Vibratory Modernism*, that experiments in science revealed ‘vibrations beyond thresholds of human perception.’¹⁰ These ‘extrasensory

vibrations' seemed to provide proof of or at least an explanation for occult phenomena and could be applied to paranormal research: new forms of media could *capture and record* these phenomena.¹¹ The waves and vibrations of these new forms of energy discovered by science as well as the occulted worlds proposed by Spiritualism could now potentially be revealed through machines.

LOVECRAFT'S DETESTABLE AND ACCURSED ELECTRICAL MACHINE

Lovecraft's short story 'From Beyond' questions the very nature of existence and what we perceive with our 'five feeble senses' as time, space, form and matter:

What do we know... of the world and the universe about us? Our means of receiving impressions are absurdly few, and our notions of surrounding objects infinitely narrow... With five feeble senses we pretend to comprehend the boundlessly complex cosmos...¹²

I would propose that Lovecraft's fiction is inspired by the concepts of sympathetic vibrations, quantum physics and the aether and the ideas of William Crookes. Crookes was a physicist and involved in psychical research from the late 1800s.¹³ He also created the Crookes tube – 'an improved vacuum tube (...) to investigate electrical discharges in gases at low pressure', which produced eerily glowing cathode rays inside a glass tube that ranged from green to violet.¹⁴

The resonating machine in 'From Beyond' seems inspired by the ideas of Crookes and his tubes and ultraviolet light and sympathetic vibrations: it is described as having a '...crowning cluster of glass bulbs (...) glowing with a sickly, sinister violet luminosity.'¹⁵ The machine '...in its experimental stage (...) had sputtered and purred when in action.'¹⁶ The workings of Lovecraft's machine are thus mysterious, involved with ultraviolet light and attributed to an esoteric form of electricity. In physics, sputtering is a process relating to the ejection of atoms (metal ions) from an electrode like a cathode.¹⁷ Lovecraft has used this term to refer to the sound that Tillinghast's machine makes. Judging by the influence that Crookes evidently had on Lovecraft, it seems likely that the term was adapted from scientific rhetoric around the Crookes tube and absorbed it into his fiction. This adaptation of scientific language is, as we will see, a method that Pynchon also uses.

Crookes' 1892 hypothesis on the sensory perception mechanisms of other life forms and their perception of light rays and electrical/ magnetic vibrations spoke of:

...other sentient beings [that] have organs of sense which do not respond to some or any of the rays to which our eyes are sensitive, but are able to appreciate other vibrations to which we are blind... Imagine, for instance... we [were] endowed with eyes not sensitive to the ordinary rays of light but sensitive to the vibrations concerned in electric and magnetic phenomena.... In some part of the human brain may lurk an organ capable of transmitting and receiving other electrical rays of wave-lengths hitherto undetected by instrumental means. These may be instrumental by transmitting thought from one brain to another.¹⁸

Considered in the context of 'From Beyond', the influence of Crookes' ideas on Lovecraft seems quite clear, particularly the idea of an organ 'lurking' in the brain that responds to or emits 'other electrical rays of wave-lengths' previously unable to be detected by machine.¹⁹ With this technique, Crookes proposes a dormant part of the human brain as a type of transmitter/receiver sensitive to previously imperceptible electrical signals and suggests a type of telepathy.

In 'From Beyond', Tillinghast cries,

"You have heard of the pineal gland? (...) That gland is the great sense organ of organs - I have found out. It is like sight in the end, and transmits visual pictures to the brain... that is the way you ought to... get most of the evidence from beyond."²⁰

It could be said that developments in science and theories in quantum physics acted on Lovecraft's imagination much the same way that his 'detestable' and 'accursed electrical machine' worked on the protagonist's pineal gland: they suggested a whole occulted or invisible surrounding world of sinister and occult matter, waiting to be unveiled, unseen connections between objects or beings separated in time and space.²¹

For Lovecraft these new discourses about occulted worlds surrounding us through waves and vibrations lent themselves to the other unseen worlds that he created. In Lovecraft's machine the resonant waves emitted act on the pineal gland of the user revealing an atmosphere permeated by insidious life forms normally unseen. In Lovecraft's (Tillinghast's) machine, ideas and language from science are employed to reveal the occult - ultraviolet rays, resonant waves, vibrations, electrons, particles, matter, time and magnitude and energy and occult life forms, seething around the horrified protagonist. Lovecraft's machine allows for 'a kind of augmented sight (...) breaking down the barrier' between our

supposedly material world and the occulted immaterial world inhabited by grotesque quivering jellyfish-like creatures that the protagonist sees around him.²²

The tale questions our conceptions of materiality; of matter as solid, echoing questions that were being asked in science at this time as the machine allows the protagonist to see with horror that his body and other forms can be passed through:

I felt the huge animate things brushing past me and occasionally walking or drifting through my supposedly solid body (...) I saw to my horror that they overlapped; that they were semi-fluid and capable of passing through one another and through what we know as solids (...) I felt that I was about to dissolve or in some way lose the solid form.²³

Sympathetic vibration (or resonance) is an important feature of the narrative, as Lovecraft describes how when the housekeeper ‘...turned on the lights downstairs... the wires picked up sympathetic vibrations’ and how the “inky, jellyfish monstrosities... flabbily quiver[ed] in harmony with the vibrations from the machine.”²⁴ Anthony Enns and Shelley Trower describe in *Vibratory Modernism* the importance of sympathetic vibration in relation to the concept of ‘the body as borderless’ in terms of the continuation of vibrations from within the body to without, explaining ‘...how energy or expression or communication could be transited between and beyond bodies across space and time.’²⁵ The phenomenon of sympathetic vibration, as Enns and Trower propose, ‘operated far beyond any singular period or field (...and....) clearly illustrates the connections between science and occultism that developed through the Victorian period and into modernism...’²⁶

PERPETUAL MOTION, ENTROPY AND MAXWELL’S DEMON IN PYNCHON’S NEFASTIS BOX

In *The Crying of Lot 49*, Pynchon has weaved hard science into a paranoiac 1960s conspiracy plot that involves an underground mail service and a Jacobean revenge play while mixing Maxwell’s theory on entropy (and perpetual motion) with the paranormal technique of telekinesis. In the narrative, the central character of Oedipa meets the paranoiac Koteks at Yoyodyne labs. He tells her about the Nefaststis machine (invented by the eccentric John Nefastsis), which utilises James Clerk Maxwell’s theory combining it with a most *unscientific* use of telekinesis:

...the Nefastis Machine contained an honest-to-God Maxwell's Demon. All you had to do was stare at the photo of Clerk Maxwell, and concentrate on which cylinder, right or left, you wanted the Demon to raise the temperature in. The air would expand and push a piston. The familiar Society for the Propagation of Christian Knowledge photo, showing Maxwell in right profile, seemed to work best (...) "Not everybody can work it, of course, only people with the gift. "Sensitives," John calls them."²⁷

When Oedipa meets Nefastis, he tells her that:

"The Demon passes his data on to the sensitive, and the sensitive must reply in kind. There are untold billions of molecules in that box. The Demon collects data on each and every one. At some deep psychic level he must get through. The sensitive must receive that staggering set of energies, and feed back something like the same quantity of information. To keep it all cycling."
(Pynchon, 1966, 72)

Thus in Pynchon the scientific process of Maxwell's Demon can only be awoken or activated by an occult force, through a person with paranormal power.

In his article, 'Pynchon and Electro-Mysticism,' Friedrich Kittler discusses Thomas Pynchon's electro-mysticism (as Pynchon himself has termed it in his novels).²⁸ Pynchon's electro-mysticism can be seen in *The Crying Of Lot 49* with the holy radio disc jockey '... cueing the next record with movements stylized as the handling of chrism, censer, chalice might be for the holy man...'²⁹ Kittler points out another example in Pynchon's description of Mondaugen, the legislator and radio technician in *Gravity's Rainbow*, who:

thought of himself [...] as a radio transmitter of some kind. [...] In his electro-mysticism, the triode was as basic as the cross in Christianity. Think of the ego, the self that suffers a personal history bound to time, as the grid. The deeper and true Self is the flow between the cathode and plate. The constant, pure flow. Signals – data sense, feelings, memories relocating – are put onto the grid, and modulate the flow. We live lives that are waveforms constantly changing with time, now positive, now negative. Only at moments of great serenity is it possible to find the pure, the informationless state of signal zero. "In the name of the cathode, the anode, and the holy grid?" said Pökler. (Kittler, 2008, 118; Pynchon, 1973, 404)

Here electronic components are paralleled with the Holy Trinity of Christianity in their superimposition onto (the being of) Mondaugen's psychology. Pynchon's idea of Mondaugen

the radio technician in *Gravity's Rainbow* as 'a radio transmitter of some kind' parallels Crookes' ideas about an organ lurking in the brain (and also the machine-user relationship in *From Beyond*) that could send and receive, allowing for '...transmitting and receiving other electrical rays of wave-lengths hitherto undetected.'³⁰

In their article, 'Hard Science and the Paranormal in Gravity's Rainbow: Precognition Machines, Cockroaches, and Not *That* Helmut Schmidt,' Stephen Tomaske and Terry Reilly examine the connection between 'hard science' and 'the paranormal.'³¹ They point out the ways that these two elements continue to converge in *The Crying of Lot 49* through the example of the Nefastis machine:

...Pynchon parodically conflates thermodynamics and telekinesis (...) Koteks, of course, asserts that Nefastis is a real scientist... but... the seriousness of the representation is undermined when Koteks says that the machine works – responds to telekinesis – only under the influence of "'Sensitives'" – "people with the gift". Such serio-comic representations, far more fully elaborated and complex in GR [*Gravity's Rainbow*], indicate Pynchon's interest in both contemporary scientific developments and in popular interest in the paranormal.³²

Tomaske and Reilly also propose that Pynchon was influenced by the paranormal experiments at Boeing Scientific Research Labs by physicist Helmut Schmidt in the late 1960s. They identify similarities in the vocabulary of Schmidt's tests and Pynchon's writing: the language and even the structure of the scientific experiments influenced Pynchon's style. Referencing *A Gravity's Rainbow Companion: Sources and Contexts for Pynchon's Novel*, Tomaske and Reilly describe how the scientific jargon and 'esoteric cant' of the paranormal become interchangeable in Pynchon.³³ Maybe like Schmidt and the machines he built, Pynchon wanted to '...challenge accepted rules of quantum physics' through his fictional machine in *Crying of Lot 49*, which, although based on James Clerk Maxwell's scientific hypothesis, paradoxically relied on the telekinetic power of its user.³⁴ Kittler proposes that '...Pynchon's passion for "equation[s]" that "elegant[ly] blend [...] philosophy and hardware, abstract change and hinged pivots of real metals," overwrites even the history of science.'³⁵ Lovecraft, through Tillinghast in *From Beyond*, mixes philosophy and science. Pynchon, '...philosophy and hardware...', rocket launch and ritual, landscape and circuit board, radio broadcaster and holy man, 'circuits and ethics.'³⁶ Kurt Mondaugen in *Gravity's Rainbow* says, 'Personal density is directly proportional to temporal bandwidth.'³⁷

CONCLUSION

While Lovecraft's machine acts on its user, awakening new or dormant perceptual awareness of an occulted surrounding world via the resonant waves it generates, Pynchon's (Nefastis') machine works in the reverse direction, activated telekinetically only by a 'Sensitive' user, creating movement by awakening Maxwell's Demon within it. Thus with Lovecraft's machine, the user can be seen as a receiver, while in Pynchon's the user is the transmitter and the machine is the receiver.

Both Pynchon and Lovecraft position their characters as a type of human transmitter/receiver. In each text an almost mystical communion between user and machine occurs. In Lovecraft, in parallel with Crookes' idea of human transmission/reception of electrical wave lengths, this reception allows for perception of previously imperceptible frequencies of light, sound and other occulted worlds, while in Pynchon, concentrated thought energy can actually cause physical movement in the machine (through the process of telekinesis) and the behaviour of the cathode and the anode on the 'holy grid' become metaphors for the human condition.³⁸

As I have shown, both Lovecraft and Pynchon were influenced by the language, methods and tropes of scientific enquiry that bordered on or delved into the occult. For Lovecraft new scientific knowledge helps to reveal the (unseen) horrors of the occulted and occult world while for Pynchon scientific and electronics theory (diagrams and method) are often intermixed with the occult and used as metaphors for characters, even plot structures. The occult becomes the driving force in the plot, further animating the machines and their surrounding environments. Both of these narratives pry open the bounds of perception, suggesting that (in conjunction with the occult) technology can awaken or reveal something unseen. While Lovecraft and Pynchon's application and expression may have differed, both were influenced by the occult or paranormal and by the scientific experiments and technologies of their times, including those that were applied to the occult or that were able to open up '...many vistas unknown to man (...) to see and study whole worlds of matter, energy, and life which lie close at hand yet can never be detected with the senses we have...' ³⁹

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