

ALBERTOPOLIS DISPARU



BY
ANONYMOUS

Albertopolis Disparu: an introduction
to James Colvin's Terminal Session
By Anonymous

Editor's note

Some readers may be aware that I have recently been writer in residence at the Science Museum, London. While researching in those parts of the Museum's collections held at the Imperial College library I came across a number of foolscap pages which had been inserted between the leaves of Volume One of the Cyclopaedia of Telegraphy and Telephony (American Technical Society, 1911). To my astonishment these notes, by author unknown, formed an introduction or preface to a hitherto uncatalogued work by the late James Colvin, apparently bearing the title of Terminal Session.

The author, whoever he may be, acknowledges the assistance of a 'Mr Michael Moorcock of New Worlds magazine' with whom I have now made contact at his current home in Bastrop, Texas. Whilst Mr Moorcock did recall numerous highly amusing anecdotes concerning Mr Colvin, he was unable to recollect the manuscript in question, nor could he remember any such request being made of Colvin's literary estate.

Despite these setbacks, I felt that this short text might still be of general interest, so we have great pleasure in presenting it to you here. I ask only that if any reader is aware of the existence of either manuscript or printed copies of Terminal Session, or indeed has any information concerning the author of these introductory notes, that they contact either myself or the department of Exhibition and Programmes, Science Museum, London SW7.

Tony White, London

Wherever the readers of this volume find themselves, it may be assumed that we all agree an interest in the streets of London. But we do well to remind ourselves that by nothing more effortful than turning a corner, opening a door, or climbing a stair can one be translated from familiar street and public haunt to an altogether different realm, seemingly without any relation to the London of common conception.

It is just such an operation that is performed in these first pages of James Colvin's *Terminal Session* – for the publication of which here we must express gratitude primarily to Mr Michael Moorcock of *New Worlds* magazine, who generously granted access to those portions of the late Mr Colvin's estate that remained as yet untouched by the archivist's hand and even less troubled, till now, by the attentions of typesetters and publishers. Quite why this of all Colvin's works should not hitherto have been offered up to the public attention may simply be a matter of changing tastes – or perhaps that Colvin himself considered *Terminal Session* to be unfinished. Certainly, his extensive annotation of the manuscript attests to some anticipated future phase of work. Where possible in the pages that follow I have endeavoured to incorporate those notes and changes which seemed to favour clarity (any mistakes that result are of course my own).

The South Kensington that Colvin describes may seem unrecognisable at first, but who amongst us has ever really looked up to wonder what manner of world might exist up there on the heights of Albertopolis! That the rooftops of the Science Museum, the Royal Geographical Society and even the Victoria and Albert Museum, might well be crowded with observatories and meteorological laboratories is hardly far fetched, and it doesn't require too great an 'imaginative leap' to picture those same rooftops as also being cluttered with tarpaper shacks, bothies, greenhouses and ramshackle sheds of all manner and description: an aerial 'shanty town'

providing a home of sorts for those gangs of telegraphic engineers who lived and schemed and sinned and laughed aloft. Here were those motley regiments of men: the Shivering Jennies, the Rufflers, the Whipjacks, the Jarkmen and the Swaddlers. And what lives they led in and around and beneath skies dissected by a dense mesh of telegraph cables!

In Chapter One, Colvin plunges us ‘pell-mell’ into this realm of wire:

I could scarcely catch my breath for fear of losing my footing as we crossed from one building to another by means of gangways, rope-bridges and bosun’s chairs. Later, after dining aloft on the finest roasted squirrels Hyde Park could offer, I shared a pipe with the Schleppler who was acting as my guide and he told me that not only might one walk without impairment for 20 miles and not leave Albertopolis, but one might do so without setting a foot upon the ground or retracing a single step!

I saw that in all directions amidst the chimney stacks, ventilators, water tanks and other appurtenances radiated innumerable cables of various sizes. The heaviest of them were suspended from galvanised steel wires by means of rawhide slings, and all were supported on huge derricks, roof poles and standards. The largest of these was set around and atop the Queen’s Tower and supported some 12,000 cables which terminated there to plunge down in to the tunnels beneath and which alone required an almost continual attendance by teams of engineers to deal with the constant flow of repairs, reroutings, renewals &c.

The ‘modern reader’ will of course be familiar with the notion that the appearance of a machine tells little of its

function. We live in an age where the workings of the most mundane device are taken for granted yet would confound even the greatest scientific minds of the past. And so it was with this cable kingdom: the whole inanimate and without apparent purpose yet constituting the main medium by which the citizens below both disseminated and delivered their communications.

In *Terminal Session* Colvin reveals that telegraphy was far more than a civil enterprise; how in a world darkened by war South Kensington had need to become the telegraphic hub of the world, a place where enormous technological advances were made to secure the national advantage, and where the GPO, the Secret Services Bureau and the Ministry of War fought a secret 'information war' so closely guarded that today it has been almost completely forgotten.

With the museums closed and emptied under the pretext of preserving the national collections, the great halls of the old Science Museum, the infamous 'Brompton Boilers', and the tunnels beneath the Imperial Institute were given over to the creation of a species of 'listening post', but as Colvin rather breathlessly tells us on page 56:

'Machine' is perhaps too small a word to describe the complex enterprise I saw stretched out before my eyes. It was a vast network of generators, telegraphic exchanges and switchboards, difference engines, teleprinters, ticker-tape machines and phonographs, with every steam engine and turbine in the building all being connected and 'daisy-chained' together by means of a series of camshafts and belts that disappeared off in every direction, through ceiling and floor, and all were going 'full tilt' to provide enough power to run it.

This was more 'listening factory' perhaps than 'listening post', and I soon discovered that it boasted

the extraordinary capacity to ‘eavesdrop’ electronically upon all the telegraphic communications being carried by the network, which might be reckoned in the hundreds or even thousands at least of separate signals at any one time.

Here was a fleet of difference engines that had been connected to ‘the net’ (the engineers’ affectionate diminutive for both the total sum and extent of all telephone and telegraph networks and all communications thereon) by means of a series of galvanometers and Maxwell interfaces, and which chuntered away like great clockwork locomotives. Each was so finely tuned it could calculate and amplify the minute variations in current and resistance being created by the very signals that were carried by the telegraphic network – detecting these almost infinitesimally small fluctuations in the manner, let’s say, that a seismograph in London might register an earth tremor in the South China Sea and render it visible to the trained eye. Said fluctuations generated a never-ending series of algorithmic values that were then mechanically differentiated and transliterated before outpouring as a Babel of disembodied ‘voices’ or Morse code, depending on the method of transmission.

Scores of human operators sat at teletype machines or phonograph horns to monitor and record these machinic utterances, and to search for key words according to some ever-changing hierarchy of significance which when found would prompt the operator to stand up and shout out the news thus discovered, handing the transcript to a runner in order that the information could be processed by some further category of statistical filter and subjected to further analysis.

The pace of this operation was extraordinary, and where it made some men it broke others. I heard that one or two started to listen to the machines themselves, fancying they might be able to decipher cable signals by instinct; syntactic and semantic rules defined at fantastic speeds...

The bulk of Colvin's book, as readers will see, provides a technical exposition of the workings of this 'information factory', giving perhaps a greater amount of detailed and specialist information than the lay reader can entertain. He also provides extensive and comprehensive diagrams of the management and reporting structures that were put in place, and explores how the Signals Intelligence community and the GPO alike recovered from the eventual destruction of this top secret 'listening post'.

It is with this tragic event – the *Terminal Session* of the book's title – however, that his account seems to enter the realm of the 'scientific romance'. Colvin suggests that the zeppelin attack which razed the old Science Museum buildings and the bulk of the Imperial Institute was far from the conventional bombing raid that is widely documented.

London had of course become accustomed to regular visits by German zeppelins (the raids undertaken by these slow-moving and vulnerable machines being mainly confined to the darker phases of the moon, for obvious reasons) so when six of the cigar-shaped flying machines nosed down from the low cloud under cover of the new moon on the 28th of August 1916, it wasn't immediately apparent that this would be any different to previous attacks.

That the dirigibles assumed a circular formation above Exhibition Road is well known. Colvin however relies on the testimony of an eye-witness – a gunner stationed at Hyde Park Corner who told reporters of an unusual device that seemed to be slung from the gondola of each – to conclude

that the airships were in fact ‘armed’ with Tesla receivers and ‘magnifying transmitters’ capable of generating potentials of several million volts. He goes on to suggest these Tesla arrays were capable of ionizing helium from the airships’ own envelopes, and that by means of this controlled ignition the scientists of the Imperial German Navy were able to create a vast ‘plasma loudspeaker’ between all six airships – a *sonic* weapon, greater in extent than the dome of the Royal Albert Hall. (This introduces a strange anachronism for those students of aeronautics to whom it is ‘common knowledge’ that the German Navy had no access to helium, and that hitherto the first *recorded* use of said gas as a lifting agent was by the United States Navy with their C7 dirigible in 1921!) Colvin postulates that a teleharmonium aboard each ship allowed the generation of low-frequency oscillations along the lines of William Duddell’s ‘singing arc’ to create, in effect, a giant airborne ‘electronic organ’ that was able to bombard the target area with blasts of ultra low frequency sound. In other words, Colvin attests, this was a suicide mission: the zeppelin commanders were cannibalising their own engines, exhausting the very substance that enabled them to remain aloft, in order to carry out their unprecedented attack.

The reader who deduces from all of this that Colvin’s thesis contradicts all the official and scientific literature of the time would certainly be correct. War records clearly state that anti-aircraft fire destroyed all six vessels before they were able to release their payloads of conventional explosive – and that it was the combination of hydrogen combustion and TNT that left naught but the Queen’s Tower standing between Exhibition Road and Queen’s Gate.

Looking now at both the handsome grey stone facade of the new Science Museum buildings that were built at war’s conclusion and opened in 1919, and the well-equipped and internationally celebrated laboratories and classrooms of

what is now the equally prestigious Imperial College, it is almost impossible to reconcile the grandeur and permanence of these great institutions with the story related in *Terminal Session*. The casual reader then may be forgiven for needing to remind himself that, in Colvin's words, 'the scenes recorded in the following pages are not literature but history; the actors not "puppets of the imagination" but real men and women.'

Colvin also claims to have located within the Science Museum collection a single wax cylinder from the Poldhu Wireless Station near Mullion, Cornwall. Upon this fragile artefact is recorded the moment when – he says – a huge electromagnetic pulse from the airborne Tesla transmitters knocked out not only the Albetopolis telegraphic hub and the 'Listening Post' below, a few seconds before the main sonic attack, but precipitated a chain of 'system failures' throughout the network. Carried on this pulse, perhaps by some strange atmospheric radio effect, can quite clearly be heard a voice crying out, '*Welche Wunder Gott tut!*' which assiduous readers will recognise as the Lutheran translation of Numbers Chapter 23, verse 23. A phrase more familiarly rendered in our own King James Version as, 'What hath God wrought!'

[Editor's note: At this point our 'draft preface' breaks off. It may be that there are one or two further pages missing. However, another scrap of paper bears the following two paragraphs, written in the same hand as the above. The reader may infer, as I have, that these few words comprise both conclusion and dedication. TW]

Remembering that the GPO had asserted national monopoly on telephone and telegraph networks and exchanges across the country only shortly before the Great War, I was not surprised to find that there remains a Post Office building

within the bounds of the Science Museum. This letter sorting and delivery office, accessed from Imperial College Road on the north side of the museum, may be the only physical connection that remains to link us to that magnificent achievement and peak (albeit secret) of the telegraphic and mathematical sciences: the South Kensington 'listening post'.

A simple memorial plaque held in a basement room beneath these same Post Office premises commemorates the loss of some one-hundred-and-fifty-six unnamed 'Post Office workers' (so-called) in the zeppelin raid on South Kensington of 28th August 1916. It is to the memory of those brave men and women that we should like to dedicate this volume.

Acknowledgments

This story was written during Tony White's residency at the Science Museum in response to *Listening Post* by Mark Hansen and Ben Rubin. Parts of the text were created by cutting up and remixing fragments from the following sources:

Tony Austin and Jenny Mitcham, 'Preservation and management strategies for exceptionally large data formats: "Big Data"', EH Project No: 3984, Archaeology Data Service and English Heritage, 2007

William Barclay, 'The Man Who Nobody Knew,' obituary of James Colvin, *New Worlds*, 197 (January 1970)

John Merrett, *Three Miles Deep: The Story of the Transatlantic Cable* (London: Hamish Hamilton, 1958)

D Occomore, *Number Please: A History of the Early London Telephone Exchanges from 1880 to 1912* (Romford: Ian Henry Publications, 1995)

Arthur Train, 'The last of the wire-tappers', in *True Stories of Crime From the District Attorney's Office*, Project Gutenberg, 2004

Tony White is the author of novels including *Foxy-T* (Faber & Faber) and was the Science Museum writer in residence for summer 2008. Tony would like to thank Michael Moorcock, Ruth Fenton, Hannah Redler and Science Museum Arts Projects, and to acknowledge the support of Arts Council England through Grants for the Arts.

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