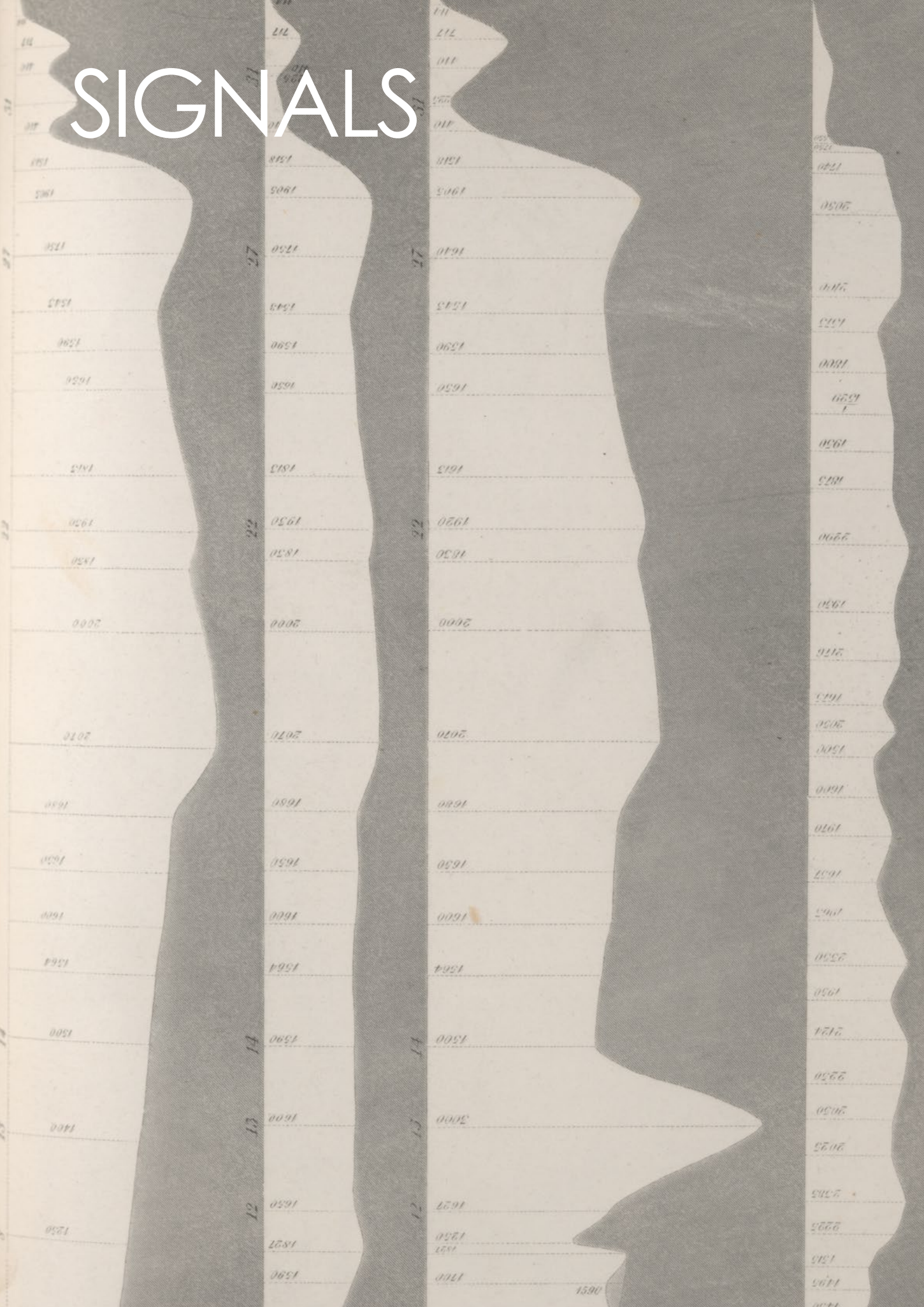


# SIGNALS



from VICTORIANS DECODED: ART AND TELEGRAPHY

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Designed by Olivia Alice Clemence

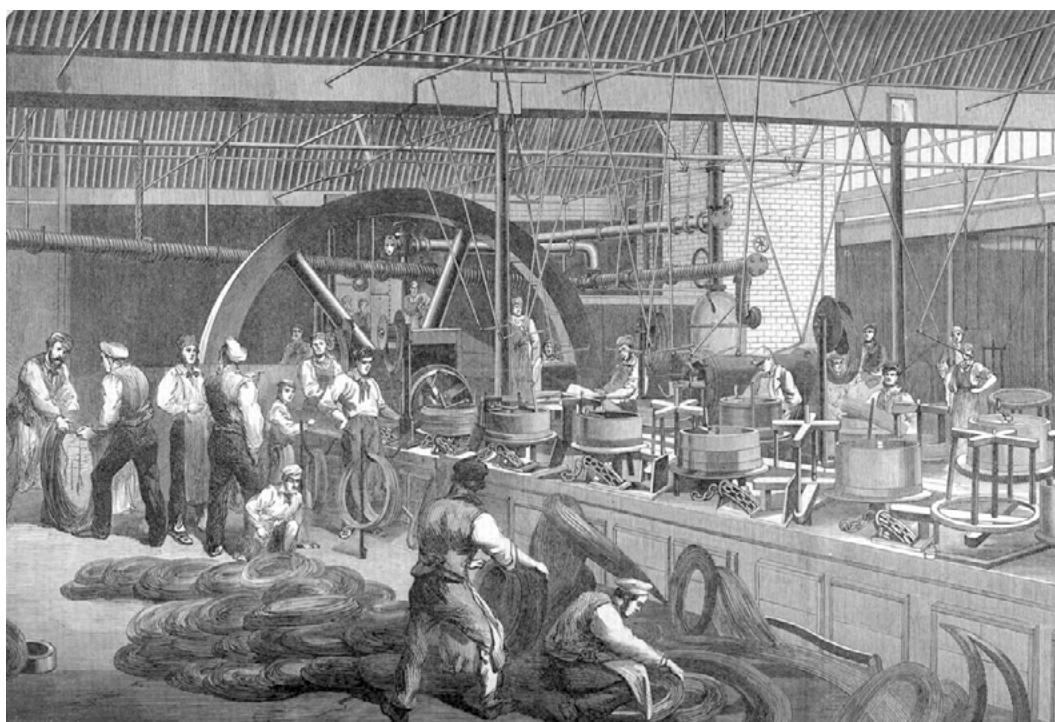
BACK AND FRONT COVER:  
James Tissot, *The Last Evening*, 1873 (details), The Guildhall Art Gallery, Corporation of London.



CATALOGUE ENTRY S1 | SIGNALS

# 1866: THE YEAR COMMUNICATION CHANGED FOREVER

## MARCH: CABLE CONSTRUCTION BEGINS

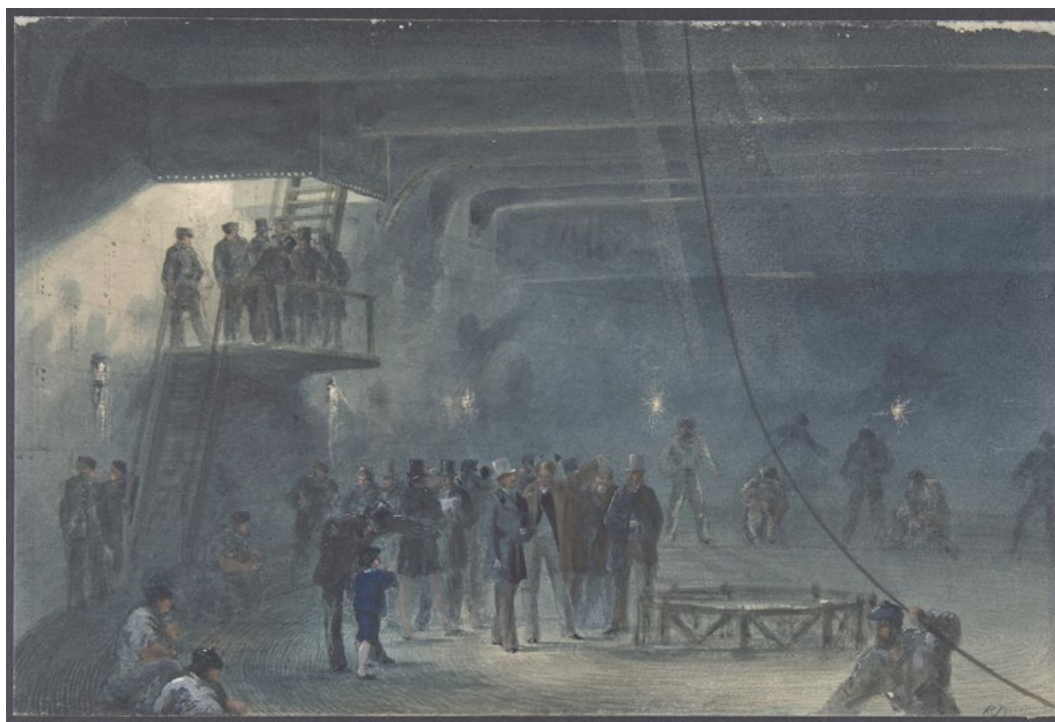


Making steel wire for the cable armouring at Greenwich, *Illustrated London News* (12 Dec, 1874), p.263. Wellcome Library, London.

The 2,300 miles of cable needed for the Atlantic telegraph was constructed in layers. A pure copper wire was coated in gutta-percha (a natural plastic). Seven strands of coated wire were then twisted together to form the core of the cable, which was wrapped in jute (hessian) and sealed with further layers of gutta-percha. The insulated core was armoured with steel wires: heavier ones for the shore end, where the cable could be damaged by anchors, and lighter for the safer deep-sea sections. A single mistake meant the failure of the whole cable, so it was electrically tested at each stage of the process.



# MAY: CABLE LOADED ON BOARD THE SS GREAT EASTERN



Robert Charles Dudley,  
*Coiling the Cable in  
the Large Tanks at the  
Works of the Telegraph  
Construction and  
Maintenance Company  
of Greenwich*, 1865.  
Watercolour, [www.  
metmuseum.org](http://www.metmuseum.org)

The finished cable sections were so heavy that the Atlantic Telegraph Company chartered the largest ship of the day - Isambard Kingdom Brunel's *SS Great Eastern* - to carry them. They planned every move carefully to avoid kinks and breakages. The cable was threaded onto pulleys, passed over the water and carefully coiled into tanks on two decommissioned war ships, which ferried it to the *Great Eastern* anchored at Sheerness. It was fed out of their holds into three huge salt-water tanks on the *Great Eastern* and painstakingly coiled again for the onward journey to Ireland.

## 7<sup>TH</sup> JULY: CABLE LAYING BEGINS



Robert Charles Dudley,  
*The Heights over Foilhummerum Bay, Valentia, the William Corey Heading Seawards, Laying the Shore-end of the Atlantic Telegraph Cable, July 7th, 1866.* Watercolour, [www.metmuseum.org](http://www.metmuseum.org)

The shore end of the cable was laid on 7 July at Valentia Island in Ireland, and SS Great Eastern, anchored off the coast, set sail on 13 July to begin laying it across the Atlantic. Signals were sent from the land end to the testing room on board, where an engineer was on watch 24-hours a day. If the signals faltered the ship could be stopped, and the cable hauled back and repaired. Unlike four previous attempts between 1857 and 1865, this time the weather was good and the expedition passed without incident.

## 27<sup>TH</sup> JULY: THE SHORE-END OF THE CABLE IS LANDED AT NEWFOUNDLAND



Robert Dudley, Charles  
Dudley, *Landing at  
Newfoundland*, 1866.  
Oil on canvas, [www.  
metmuseum.org](http://www.metmuseum.org)

The *SS Great Eastern* arrived in Heart's Content, Newfoundland on 27 July. The end of the deep-sea section of the cable was carefully spliced to the heavily armoured shore-end of the cable. Waist high in water - and with much cheering - sailors and locals grabbed the cable and hauled it up the beach to the cable shed. Engineers worked through the night to make the link with London in time for the morning news. The project had finally succeeded.

## AUGUST AND SEPTEMBER: RECOVERING THE LOST CABLE OF 1865



Testing the recovered 1865 cable on board the Great Eastern, *Illustrated London News* (13 Oct, 1866), p.365. Wellcome Library, London.

Two weeks later, the Great Eastern went in search of the 1865 cable, lost 600 miles from shore. Four ships grappled the sea bed two-and-a-half miles down for a month. On 1 September, on their 30th attempt, they hooked the lost cable and retrieved it. Signals were sent to Ireland and after a few tense seconds the line jumped into life to wild celebration on board. The last 600 miles of extra cable were then laid back to Newfoundland. SS Great Eastern returned having laid not one but two Atlantic cables.



# A NEW ERA OF GLOBAL COMMUNICATION BEGINS



News from around the world in the Central Telegraph Office Instrument Gallery, *Illustrated London News* (12 Dec 1874), p.568. Wellcome Library, London.

By the 1870s transatlantic telegraphy was well-established. At an astounding eight words per minute the latest news criss-crossed the Atlantic bringing bulletins about reform riots in Hyde Park, war between Prussia and Italy, Napoleon arming his fleet, stocks, shares and bank rates. It brought news of Florence Nightingale, fabric prices in Calcutta, Fenian plots and attempts to assassinate the Czar alongside tips for Goodwood and the Derby. The Atlantic telegraph touched every part of life and brought the 'old world' of Europe into instantaneous contact with the 'new world' of the Americas.

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