

Imperial Science

In the second half of the nineteenth century, British firms and engineers built, laid, and ran a vast global network of submarine telegraph cables. For the first time, cities around the world were put into almost instantaneous contact, with profound effects on commerce, international affairs, and the dissemination of news. Science, too, was strongly affected, as cable telegraphy exposed electrical researchers to important new phenomena while also providing a new and vastly larger market for their expertise. By examining the deep ties that linked the cable industry to work in electrical physics in the nineteenth century – culminating in James Clerk Maxwell’s formulation of his theory of the electromagnetic field – Bruce J. Hunt sheds new light both on the history of the Victorian British Empire and on the relationship between science and technology.

Bruce J. Hunt is an Associate Professor of History at the University of Texas at Austin.

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Imperial Science

*Cable Telegraphy and Electrical Physics
in the Victorian British Empire*

Bruce J. Hunt

University of Texas at Austin



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Contents

<i>List of Figures</i>	page vi
<i>Acknowledgments</i>	viii
<i>List of Abbreviations</i>	x
Prologue: “An Imperial Science”	1
1 “An Ill-Understood Effect of Induction”: Telegraphy and Field Theory in Victorian Britain	3
2 Wildman Whitehouse, William Thomson, and the First Atlantic Cable	37
3 Redeeming Failure: The Joint Committee Investigation	97
4 Units and Standards: The Ohm Is Where the Art Is	144
5 The Ohm, the Speed of Light, and Maxwell’s Theory of the Electromagnetic Field	181
6 To Rule the Waves: Britain’s Cable Empire and the Making of “Maxwell’s Equations”	216
Epilogue: Full Circle	272
<i>Bibliography</i>	276
<i>Index</i>	299

Figures

1.1	<i>Goliath</i> laying the short-lived first Channel cable in 1850	page 11
1.2	The 1851 English Channel cable, as retrieved in 1859	12
1.3	Lines of force around wires carrying electric currents	19
1.4	William Thomson's curves showing how an electric current rises in a cable	35
2.1	Cyrus W. Field, John Watkins Brett, Charles Tilston Bright, and Wildman Whitehouse	39
2.2	The route of the 1858 Atlantic cable	42
2.3	Wildman Whitehouse's telegraphic recorder and marked paper tapes	49
2.4	William Thomson in 1852	51
2.5	Crewmen coiling the first Atlantic cable on the US warship <i>Niagara</i>	67
2.6	Wildman Whitehouse's magneto-electrometer	71
2.7	William Thomson's mirror galvanometer	79
2.8	William Thomson's marine galvanometer	82
2.9	A souvenir piece of the 1858 Atlantic cable, sold by Tiffany's	85
2.10	Theodor Linde's depiction of the Newfoundland cable station in 1858	88
2.11	Captain Frederic Brine's map of Valentia harbor, 1859	93
3.1	The routes of the Red Sea and India cables, 1859–60	115
3.2	Title page of the <i>Joint Committee Report</i> , 1861	126
3.3	William Thomson reading a letter from Fleeming Jenkin in 1859	130
3.4	Specimens of cable types	135
4.1	Latimer Clark and Cromwell Fleetwood Varley	147
4.2	Fleeming Jenkin's self-portrait, 1859	154
4.3	The British Association spinning coil resistance apparatus	171
4.4	A British Association resistance coil	172
5.1	Maxwell's vortex model of the ether	184
5.2	Maxwell's apparatus for measuring the ratio of units (v)	210

List of Figures	vii
5.3 Portrait of Maxwell with the British Association spinning coil resistance apparatus	214
6.1 The <i>Great Eastern</i> grappling for the broken end of the Atlantic cable	225
6.2 “Awaiting the Reply” in 1866	229
6.3 <i>Vanity Fair</i> caricature of “cable king” John Pender	240
6.4 Plaque showing the vector form of “Maxwell’s equations”	257
6.5 Oliver Heaviside at his home in Devonshire in 1893	258
7.1 The global cable network, circa 1901	273

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Abbreviations

ATC Minute Book	Minute Book of the Atlantic Telegraph Company, October 26, 1856, to April 9, 1858, BICC Archive, Merseyside Maritime Museum, Liverpool
<i>BA Report</i>	<i>Report of the Annual Meeting of the British Association for the Advancement of Science</i>
C&W	Cable and Wireless Archives, PK Porthcurno Museum of Global Communications
CUL	Cambridge University Library
CUL-RGO	Royal Greenwich Observatory Archives, Cambridge University Library
<i>Elec.</i>	<i>The Electrician</i>
<i>Further Corr. 269</i>	<i>Further Correspondence Respecting the Establishment of Telegraphic Communications in the Mediterranean and with India</i> , British Parliamentary Papers, 1860, LXII.269
<i>Further Corr. 461</i>	<i>Further Correspondence Respecting the Establishment of Telegraphic Communications in the Mediterranean and with India</i> , British Parliamentary Papers, 1860, LXII.461
Heaviside, <i>EP</i>	Oliver Heaviside, <i>Electrical Papers</i> , 2 vols. (London: Macmillan, 1892)
Heaviside, <i>EMT</i>	Oliver Heaviside, <i>Electromagnetic Theory</i> , 3 vols. (London: Electrician Co., 1893–1912)
IET	Institution of Engineering and Technology Archives, London
<i>Joint Committee Report</i>	<i>Report of the Joint Committee to Inquire into the Construction of Submarine Telegraph Cables</i> , British Parliamentary Papers, 1860, LXII.591
Maxwell, <i>SLP</i>	James Clerk Maxwell, <i>Scientific Letters and Papers of James Clerk Maxwell</i> , ed. P. M.

List of Abbreviations

xi

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|--------------------------|---|
| | Harman, 3 vols. (Cambridge: Cambridge University Press, 1990–2002) |
| Maxwell, <i>SP</i> | James Clerk Maxwell, <i>Scientific Papers of James Clerk Maxwell</i> , ed. W. D. Niven, 2 vols. (Cambridge: Cambridge University Press, 1890) |
| Maxwell, <i>Treatise</i> | James Clerk Maxwell, <i>Treatise on Electricity and Magnetism</i> , 2 vols. (Oxford: Clarendon Press, 1873) |
| ODNB | <i>Oxford Dictionary of National Biography</i> |
| <i>Phil. Mag.</i> | <i>Philosophical Magazine</i> |
| <i>Phil. Trans.</i> | <i>Philosophical Transactions of the Royal Society of London</i> |
| <i>Proc. ICE</i> | <i>Proceedings of the Institution of Civil Engineers</i> |
| <i>Proc. RS</i> | <i>Proceedings of the Royal Society of London</i> |
| <i>Red Sea Contract</i> | <i>Electric Telegraph Companies. Copies of All Correspondence between the Electric Telegraph Companies Under Contract with the Government Respecting the Failure to Lay Down or Keep in Working Order the Electric Wires</i> , British Parliamentary Papers, 1860, LXII.211 |
| Smith, <i>Reports</i> | F. E. Smith, ed., <i>Reports of the Committee on Electrical Standards Appointed by the British Association for the Advancement of Science</i> (Cambridge: Cambridge University Press, 1913) |
| Thompson, <i>Kelvin</i> | Silvanus P. Thompson, <i>The Life of William Thomson, Baron Kelvin of Largs</i> , 2 vols. (London: Macmillan, 1910) |
| Thomson, <i>MPP</i> | William Thomson, <i>Mathematical and Physical Papers</i> , 6 vols. (Cambridge: Cambridge University Press, 1882–1911) |
| WC-NYPL | Wheeler Collection of Electricity and Magnetism, Rare Book Collection, New York Public Library |

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