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DISTANCE AND DISTURBANCE: TRAVEL, EXPLORATION AND KNOWLEDGE IN THE NINETEENTH CENTURY*

By Felix Driver

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ABSTRACT. How should information about distant places be collected? How should it be made available to the reading public? And how far could it be trusted? Such questions were posed by the expansion of exploration and travel during the eighteenth and nineteenth centuries. According to the leading scientific authorities, the making of accurate observations, the use of precise instruments, the methodical collection of specimens and the writing of narratives provided the principal means by which knowledge itself could travel. Yet the relationship between metropolitan science, travel writing and field observation remained fraught with difficulty. This essay considers a variety of ways in which the experience of disturbance shaped the culture of exploration during the nineteenth century, focusing in particular on writing, collecting and sketching.

In the annals of exploration and discovery, there are many strange and wonderful tales, but few quite so singular as the case of ‘Hollowayphobia’ narrated by the traveller and novelist Winwood Reade in his *African Sketch-Book*, published in 1873. This is the story of a nervous middle-aged Englishman, Archibald Potter, who develops a phobia about the advertisements for Holloway’s pills which he sees prominently displayed around the public spaces of Victorian London. The name ‘Holloway’, we are told, bore down on him

every hour of the day, in every newspaper he read, in every omnibus he entered, at every railway station, on every boarding . . . He looked down as he walked and found it written on the paving stones; he shut himself up at home, and it came to him as a prospectus by post, and dropped out of the books which were brought from the circulating library.

The very word made his flesh creep. Increasingly distressed, he flees abroad and eventually reaches the shores of Africa where he hopes

* I am grateful to Luciana Martins, Beryl Hartley, Sandip Hazareesingh, Simon Naylor and Catherine Hall for comments on various versions of this essay. The latter part draws on research conducted with Luciana Martins for an AHRB research project on ‘Knowing the tropics: British visions of the tropical world, 1750–1850.’

to escape the tyranny of the commodity sign. But on landing in Sierra Leone, he is alarmed to come across a crimson poster 'with *Holloway's Pills* upon it, in letters of gigantic stature'; in Angola he finds respite, but his nerves are shattered by the discovery of the remains of yet another poster recycled to wrap a long-awaited parcel of boots. So on he travels further and further into the heart of Africa, finally settling in a remote forest village. But here he discovers the final horror. That distinctive Holloway's poster, seemingly the ultimate mark of modernity, has been transformed by the locals into a 'fetish': 'the beautiful crimson colour, the great black stripes, the crisp rustling of the paper, which they supposed to be the voice of the demon from within, [had] powerfully affected their imagination'. Enraged and disorientated, the traveller rips the poster to shreds, only narrowly avoiding a violent death in the ensuing struggle. He dejectedly makes his way back to England, and continues to suffer: even the most innocuous of greetings – 'Hollo! old fellow, how are you?' – sends him into convulsions. Eventually, and somewhat miraculously, he is cured of his ailment – unlikely as it may seem – by actually taking a course of the pills.¹

I

Reade's curious tale provides a useful prologue to an essay on the theme of travel, exploration and disturbance. At the level of form, for example, it raises some important questions about the genre of travel writing. What was this story doing within the pages of a book which was supposed to represent the fruits of its author's exploring expeditions to West Africa? Winwood Reade, novelist and would-be explorer, had indeed travelled to both Angola and Sierra Leone during the 1860s.² On his second expedition, sponsored by the trader Andrew Swanzy, he had been loaned equipment by the Royal Geographical Society; he had sent botanical specimens to Kew, and ethnological information to Darwin, and he had tried, at least, to collect insects for the naturalist Henry Walter Bates. His aspirations as a novelist having met with failure at the hands of unforgiving critics, he had turned to the worlds of anthropology, natural history and medicine in his quest to become a 'man of science', a disciple of Huxley and Darwin. But Reade's style in the *African Sketch-Book* was thoroughly writerly, conspicuously blurring the frontiers between exploration narrative and romantic fiction. The accompanying illustrations picture Reade himself as the principal subject

¹ William Winwood Reade, *The African Sketch-Book* (2 vols., 1873), I, 169–201.

² Felix Driver, 'Becoming an Explorer: The Martyrdom of Winwood Reade', in *Geography Militant: Cultures of Exploration and Empire* (Oxford, 2001), 90–116; J. D. Hargreaves, 'Winwood Reade and the Discovery of Africa', *African Affairs*, 56 (1957), 306–16.

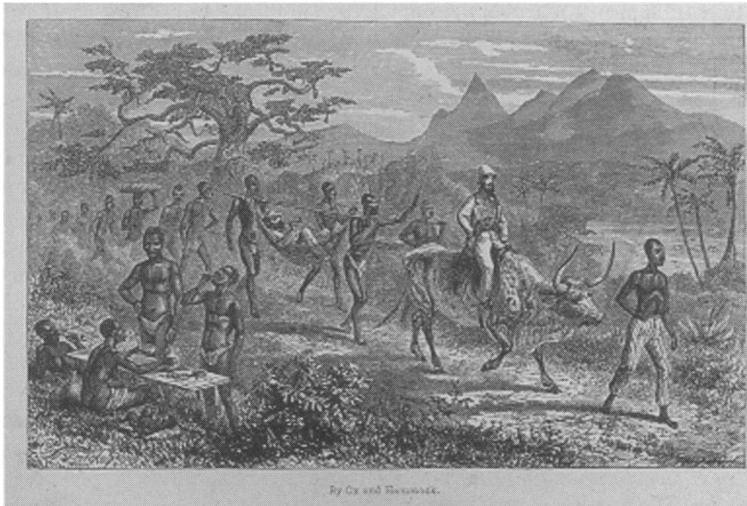


Figure 1 W. Winwood Reade, 'By Ox and Hammock', from *The African Sketch-Book* (2 vols., 1873), 1.

of the story, a latter-day Mungo Park in search of the sources of the Niger (Figure 1).

I have found the idea of a 'culture of exploration' useful as a means of highlighting the ways in which ideas, images and practices of exploration traversed the realms of public culture during the long nineteenth century. It is not that boundaries do not exist between, say, scientific exploration and adventurous travel, the sober and the sensational, or the analytical and the aesthetic. It is just that these boundaries are always in the process of construction: far from taking them for granted, the task of the historian is to highlight their unsettled nature. Throughout the nineteenth century, as in our own time, the idea of exploration was freighted with a variety of meanings, associated variously with science, literature, religion, commerce and empire. The business of the scientific explorer was not always, or easily, distinguished from that of the literary flaneur, the missionary, the trader or the imperial pioneer. True, Winwood Reade was in many ways a marginal figure, whose brief and unsparkling career as a writer was cut short by his death at the age of thirty-six: shortly before the end, he wrote despondently to a friend that 'After all my African fevers and dysenteries safely got over I am to die of consumption like the heroine in a novel.'³ Yet for all Reade's sense of failure, his negotiation of the dual

³ West Sussex Records Office, Maxse Papers, 203: Winwood Reade to Frederick Maxse, 3 Mar. 1875.

spheres of fiction and travel writing tells us something important about the wider cultures which he attempted to negotiate. The hostile response of the literary establishment to Reade as a writer anticipates the response of the geographical establishment to Henry Morton Stanley as an explorer. In both cases, 'sensationalism' was the key term, a charge that crystallised deep anxieties about social change, culture and civilisation.⁴

The moment of Reade's death in 1875 marked, I think, a significant shift in the history of this culture of exploration, signalled by the arrival of more recognisably modern figures like Stanley on the public stage. Reade himself – like Joseph Conrad after him – was captivated by the romance of navigation and exploration in an earlier era – that of Cook and Humboldt – when the dominion of natural science was extended over the blank spaces of the globe.⁵ In this context, we should note that historians have come increasingly to appreciate the aesthetic and indeed literary dimensions of what has come to be known as 'Humboldtian science', a research programme more usually associated with the use of new instruments, a commitment to fieldwork, analytical precision, measurement and above all mapping in the study of magnetic, geodetic, climatic, biogeographical and geological variations across the globe. As Michael Dettelbach has argued, Humboldt's work as a whole can be seen as constituting an aesthetic project, an effort to define a scientific sensibility for a new age, synthesising subjective experience and universal law.⁶ As far as the grander goal of philosophical synthesis is concerned, the project may have been doomed: yet we should not underestimate the continuing significance of writing in the form of the travel narrative for the culture of scientific exploration.

Consider, for example, the career of one of Humboldt's many British admirers: Basil Hall, naval officer, Fellow of the Royal Society and one of the founders of the Royal Geographical Society in 1830. Hall was a prominent representative of an influential group of 'scientific servicemen', actively engaged in the pursuit of scientific investigations in the early decades of the nineteenth century.⁷ His exemplary scientific credentials were confirmed by the astronomer John Herschel in his

⁴ Felix Driver, 'Henry Morton Stanley and his Critics', *Past and Present*, 133 (1991), 134–66; W. Hughes, *The Maniac in the Cellar: Sensation Novels of the 1860s* (Princeton, 1980).

⁵ Compare, for example, Reade, 'Heroes of Central Africa', *Atlantic Monthly*, 19 (1867), 625–35, or 'African Martyrology', *Belgravia*, 1 (1867), 46–53, with Joseph Conrad, 'Geography and some explorers', in *Last Essays*, ed. R. Curle (1926), 1–31.

⁶ Michael Dettelbach, 'Global Physics and Aesthetic Empire: Humboldt's Physical Portrait of the Tropics', in *Visions of Empire: Voyages, Botany and Representations of Nature*, ed. David P. Miller and Peter H. Reill (Cambridge, 1996), 258–92. On the question of Humboldtian travel narrative, see Nigel Leask, *Curiosity and the Aesthetics of Travel Writing* (Oxford, 2002), 281–98.

⁷ David Miller, 'The Revival of the Physical Sciences in Britain, 1815–1840', *Osiris*, new series 2 (1986), 107–34.

Preliminary Discourse on the Study of Natural Philosophy (1830), a widely quoted defence of contemporary scientific epistemology. In a passage praising Hall's accurate navigation of an 8,000 mile track from the west coast of Mexico round Cape Horn to Rio de Janeiro, Herschel portrayed the feat as a kind of travelling experiment in which a hypothesis based on observations at sea was tested against the experience of arriving safely at port. 'It is needless to remark', Herschel noted, 'how essentially the authority of a commanding officer over his crew may be strengthened by the occurrence of such incidents, indicative of a degree of knowledge and consequent power beyond their reach.'⁸ Herschel's example was well chosen, insofar as it emphasised the practical utility of scientific observation and, more subtly, the virtues of a social hierarchy based on skill rather than birth. Yet it was also partial, for a naval captain's authority over his crew was not equivalent to the reputation of a scientific observer amongst his peers: and the credibility of observations in the field (or at sea) depended on more than mathematical skill or reliable instruments. The authority of the explorer, in fact, depended substantially on the writing of a narrative of travel, either first or second hand. Ironically, in fact, Basil Hall himself would later become much better known – perhaps in a sense more authoritative – as a writer of popular travel literature, including nine volumes published in the 1830s under the title *Fragments of Voyages and Travels*. Alas, this work was Hall's undoing: as one biographer recalls, 'constant literary exertion weakened his brain, and he lost his reason'.⁹

Basil Hall's descent into madness brings me back to the disturbing case of 'Hollowayphobia' with which I opened this essay. The idea of madness – or simply bewilderment – is a common theme within the literature of travel and exploration, and it serves a variety of purposes, most notably in naming the sense of disorientation which always threatened the unwary traveller.¹⁰ But Reade does not present the case of Hollowayphobia as a by-product of exploring the unfamiliar or encountering the exotic: on the contrary, it is a symptom of an ever-more global modernity. In this tale – part parable, part parody – the spell of the commodity sign is transformed into a curse, as its victim finds himself confronted with an all-too-literal rendering of what Marx had called (just a year or two before) 'commodity fetishism'. We might pause here to reflect on the

⁸ John Herschel, *Preliminary Discourse on the Study of Natural Philosophy* (1830), 29. Herschel's notion of the ship as an instrument, and its captain as a heroic experimenter, was not in itself new: see Richard Sorrenson, 'The Ship as a Scientific Instrument in the Eighteenth Century', in *Science in the Field*, ed. H. Kuklick and R. Kohler (Chicago, 1996), 221–36.

⁹ Basil Hall, *Fragments of Voyages and Travels* (3 series, 9 vols., Edinburgh, 1832–3). The quote is from a biographical preface to one of many abridged editions: *Voyages and Travels* (1895).

¹⁰ Johannes Fabian, *Out of our Minds: Reason and Madness in the Exploration of Central Africa* (Berkeley, 2000); Jonathan Lamb, *Preserving the Self in the South Seas, 1680–1840* (Chicago, 2001).

global reach of the Holloway marketing machine during this period. The veneration of the humble pill as an agent of globalisation could reach staggering heights, as in one effusive newspaper advertisement: 'In the wilds of Tartary, the Siberian desert, the celestial empire, yea in the very mountains of the moon, are the praises of the great pillular deity Holloway sung, and his name blessed in every known and unknown tongue as the "mighty healer".'¹¹ Beside this, you might well think, Marx's remarks about commodity fetishism look pretty tame.

It hardly needs to be said that Reade's fanciful reading of the power of the commodity sign is far from Marx's highly worked metaphorical critique of the alienation of labour under capitalism. Still, the case of 'Hollowayphobia' points towards broader questions about not only the culture of the commodity in late Victorian Britain, but also the psychic and cultural aspects of urban modernity.¹² At the heart of the narrative is the theme of disturbance: first irritation, then flight, finally derangement. It presents us with a story about an unsettled life, apparently dreamed up while Reade himself was travelling through West Africa in search of a reputation for himself as a writer and traveller. It also reflects a relatively pervasive critique of the modern which one finds in various influential strands of late Victorian popular anthropology and adventure fiction.¹³ Never mind that such a critique was in many ways itself irredeemably modern, the fact that images of Holloway's pills were circulating even at the frontiers of the known world was in this perspective a matter for anxiety rather than celebration: a world of cultural difference was being contaminated by the world market. Or as the anthropologist Lévi-Strauss was to put it years later in *Tristes Tropiques*, an anti-travel narrative if ever there was one: 'The first thing we see as we travel round the world is our own filth, thrown into the face of mankind.'¹⁴ While Winwood Reade would not have subscribed to such a bleak diagnosis of what is now called globalisation, his tale does remind us that travel writing could provide a vehicle for unsettling accounts of modernity.

The fact that 'Hollowayphobia' takes the form of an escape from the metropolis rather than a journey in search of knowledge or power appears to reverse the standard narrative of exploration as a quest. Yet reflections on the vices of 'over-civilisation' are often to be found within late Victorian narratives of exploration, so much so indeed that they

¹¹ A. Harrison-Barbet, *Thomas Holloway: Victorian Philanthropist* (Egham, 1994), 75.

¹² Thomas Richards, *The Commodity Culture of Victorian England: Advertising and Spectacle, 1851-1914* (Stanford, 1990). The haunting power of advertising in the modern metropolis provided the opening theme in an essay by Charles Dickens on 'Bill Sticking', published in *Household Words* in March 1851, which may have influenced Reade's rendition of his tale.

¹³ Andrea White, *Joseph Conrad and the Adventure Tradition: Constructing and Deconstructing the Imperial Subject* (Cambridge, 1993).

¹⁴ Claude Lévi-Strauss, *Tristes Tropiques* (1973 edn), 43.

seem almost a requirement of the genre. Ironically too, given the subject of Reade's tale, the figure of the resourceful explorer was often credited in such narratives with almost occult powers when it came to exploiting modern technology to gain the confidence of indigenous peoples. Hence Samuel Baker's comments on the demonstration effects of Holloway's pills:

These are most useful to an explorer, as, possessing unmistakeable purgative properties, they create an undeniable effect upon the patient, which satisfies him of their value. They are also extremely convenient, as they may be carried by the pound in a tin box, and served out in infinitesimal doses from one to ten at a time, according to the age of the patients.¹⁵

Ultimately, though, perhaps what really matters about Reade's tale is not simply its form or its content, but its setting. The Holloway posters on London railway stations and street corners are expected, if disturbing to a sensitive soul like Archibald Potter. Sighted in various parts of Africa, their power in the mind's eye of Victorian readers becomes immeasurably more sinister. The image of Africa as the Dark Continent was coming to dominance at precisely the time this tale was published. In Reade's narratives, as in many other contemporary works, Africa functioned as a stage on which the desires and fears of white civilisation could be played out.¹⁶ At the same time, as we have seen, the tale complicates the familiar colonial story of European civilisation and African barbarism. In this context, it should be noted that Reade had already gained notoriety during the 1860s for his outspoken criticisms of Christian missions and his partial defence of polygamy in West Africa, sentiments which proved too much even for the Anthropological Society of London. These positions reflected his association with Richard Burton and the acolytes of the infamous Cannibal Club: here a politics of difference, if a conservative one, was at work.¹⁷

Reade's best-known work – *The Martyrdom of Man* (1872) – was later acclaimed by radicals and conservatives alike. The book, which became a best-seller years after Reade's death, combined an unorthodox, Africa-centred narrative of world history with a bald attack on Christianity. It was subsequently to be lauded by figures as various in their politics as Cecil Rhodes (who once said 'It made me what I am'), Sidney Webb, Harry Johnston and George Orwell.¹⁸ In the preface to his seminal essay

¹⁵ Samuel Baker, *The Nile Tributaries of Abyssinia* (1867).

¹⁶ Patrick Brantlinger, 'Victorians and Africans: The Genealogy of the Myth of the Dark Continent', *Critical Inquiry*, 12 (1985), 166–203.

¹⁷ Ronald Rainger, 'Race, Politics and Science: The Anthropological Society of London', *Victorian Studies* (1978), 51–70.

¹⁸ Cecil Rhodes read the book as an Oxford undergraduate: R. Rotberg, *The Founder: Cecil Rhodes and the Pursuit of Power* (Oxford, 1988), 100.

on *The World and Africa*, published in 1947, the African-American critic W. E. B. Du Bois reflected that 'One always turns back to Winwood Reade's *The Martyrdom of Man* for renewal of faith.'¹⁹ How different were these reactions to those in Reade's own lifetime: Gladstone attacked the book as blasphemous, Darwin (who drew liberally on Reade's travel reports in *The Descent of Man*) winced at its unrestrained assault on the established church, while most reviewers either condemned or ignored it. One of the reasons for the posthumous success of the book (and likewise its fall from favour after the mid-twentieth century) lies in its lyrical style as much as its full-blooded faith in a progressive and a rather un-Darwinian evolutionary model: the book presented a poetic portrait of human history, claimed by H. G. Wells as a prime inspiration for his *Outline of History*. Quite how and why Reade came to write this remarkable work, and to what effect, is a story which I have tried to tell elsewhere.²⁰ Suffice it to say that *The Martyrdom of Man* is one of those enormously popular Victorian books which today have almost entirely sunk without trace. Marx's version of world history did rather better.

II

Reade's meditation upon distance and disturbance draws us towards wider questions about the language of space and place, and the role such geographical imaginaries play in our understanding of exploration and travel. While the main focus of this essay is on exploration and travel, it is worth pausing to consider the parallels with recent work in the field of imperial history.²¹ In this context, the spatial language of imperialism – of metropole and colony, centre and periphery – has proved remarkably resilient, even when historians have tried to escape from its grasp. Within an imperial perspective, of course, the destiny of the colony is inevitably seen in relation to the mother-country, though the degree of its autonomy may be open to question. In the case of the British empire, it was the prospect and then the reality of decolonisation during the twentieth century that heralded the emergence of another view, as a new generation of historians questioned the primacy of the metropole in shaping the pattern of imperial policy: in this sense, it was suggested, what happened in the 'periphery' may have shaped policies

¹⁹ William E. B. Dubois, *The World and Africa: An Inquiry into the Part which Africa has Played in World History* (New York, 1947), x.

²⁰ Driver, *Geography Militant*, 106–13.

²¹ See especially Antoinette Burton, 'Rules of Thumb: British History and "Imperial Culture" in Nineteenth- and Twentieth-Century Britain', *Women's History Review*, 3 (1994), 483–99; Anne Stoler and Frederick Cooper, 'Between Metropole and Colony: Rethinking a Research Agenda', in *Tensions of Empire: Colonial Cultures in a Bourgeois World*, ed. Cooper and Stoler (Berkeley, 1997).

and practices in London, as much as vice versa. While this perspective offered a necessary corrective to the world-view of previous generations, more needed to be done than simply shifting the weights on the imperial scales. Recent work in the field of imperial history has thus eschewed the language of 'centrality' and 'peripherality' altogether, in favour of more nuanced accounts of the interrelations between different sites in and beyond empire: between, for example, Jamaica and Birmingham, the Cape and New Zealand or the City of London and Rio de Janeiro.²² As well as paying more attention to the complex dynamics of colonised societies, historians have begun to map the fractured nature of imperial projects on to the material and imaginative landscapes of the metropolis itself.²³ Effectively, the very notion of a 'centre' – the 'official mind' at the heart of empire, as it were – has been put on the analyst's couch: what we now have to consider is not one mind, or one centre, but many.

In accounts of the modern history of exploration, as in that of empire, the spatial language of centre and periphery – as in the terms home and abroad, the cabinet and the field, the metropolis and the frontier – has long held sway. In this context, the empirical knowledge of explorers and navigators is often portrayed as a counterpoint to the theoretical speculations of metropolitan theorists. Seen in this perspective, eighteenth-century voyages of exploration provided a vastly greater bank of field data for natural philosophers, transforming speculative assumptions about the way the world ought to be into accurate knowledge of the way the world actually was. Yet this account, which rests essentially on the movement from the cabinet to the field, greatly simplifies the complex and highly charged nature of debates over exploration, which threw into relief precisely the spatial contexts in which new knowledge was being generated. On the one hand, voyagers like Cook and La Pérouse certainly did write contemptuously of 'armchair geographers' speculating in the comfort of their metropolitan salons and clubs. The same criticisms were to be directed at the geographical establishment throughout the nineteenth century: one disenchanted critic of the Royal Geographical Society thus complained in 1846 that 'a few cunning map-makers and closet geographers' were conspiring to discredit 'discoveries opposed to their theories and vain speculations'.²⁴ On the other hand,

²² See for example Catherine Hall, *Colonial Subjects: Metropole and Colony in the English Imagination, 1830–1867* (Cambridge, 2002); Alan Lester, 'British Settler Discourse and the Circuits of Empire', *History Workshop Journal*, 54 (2002), 25–48; Luciana Martins and Mauricio Abreu, 'Paradoxes of Modernity: Imperial Rio de Janeiro, 1808–1821', *Geoforum*, 32 (2001), 533–50.

²³ Antoinette Burton, *At the Heart of the Empire: Indians and the Colonial Encounter in Late-Victorian London* (Berkeley, 1998); *Imperial Cities: Landscape, Display and Identity*, ed. Felix Driver and David Gilbert (Manchester, 1999).

²⁴ Hugh Robert Mill, *Record of the Royal Geographical Society* (1930), 56.

the claims of returning explorers were often greeted with incredulity at home, especially if (like Henry Morton Stanley) they lacked the credentials of the gentlemanly man of science.²⁵ Such disputes are not merely colourful episodes in an otherwise straightforward history of enlightenment: as Dorinda Outram has argued, they raise wider questions about the epistemology and authority of observation in the field.²⁶ From the perspective of the sedentary natural philosopher, scientific mastery depended less on the bodily experience of movement into new spaces, than on the observer's very capacity to reflect on knowledge gathered at a distance. In this view, the cabinet is the place where the raw material of nature is imaginatively synthesised, patiently transformed into true knowledge. This tension between the speculative knowledges of the cabinet and the mobile knowledge of the field remained in evidence throughout the nineteenth century. For geography, as for many other field sciences during this period, the question was how to be both in and out of the closet.

The increased emphasis on observation in the field raised fundamental questions about how the explorer's knowledge itself could travel across space. How should information about distant places be gathered? By what means could it be made available to metropolitan science? How could its credibility be guaranteed? Given that the field was necessarily a more open and more diverse space than that of the study or the laboratory, there had to be ways of ensuring that claims to the production of new knowledge could be trusted. According to the metropolitan scientific academies and societies of the day, one of the prime ways of ensuring that observations could be relied upon was through the requirement that travellers record information precisely and methodically: most commonly, through the use of authorised instruments, techniques of observation and inscription. A whole methodology of observation was designed to ensure that reliable and unvarnished information could be collected, stored and eventually transmitted back to the centre. Effectively, this process represented the extension of the space of the cabinet into the field, in the interests of metropolitan 'centres of calculation'.²⁷

²⁵ Driver, 'Henry Morton Stanley'; Stuart McCook, "'It May Be Truth, but It Is Not Evidence": Paul du Chaillu and the Legitimation of Evidence in the Field Sciences', in *Science in the Field*, ed. Kuklick and Kohler, 177–97.

²⁶ Dorinda Outram, 'On Being Perseus: New Knowledge, Dislocation and Enlightenment Exploration', in *Geography and Enlightenment*, ed. David Livingstone and Charles Withers (Chicago, 1999), 281–294, and 'New Spaces in Natural History', in *Cultures of Natural History*, ed. Nicholas Jardine, James Secord and Emma Spary (Cambridge, 1996), 249–65.

²⁷ David Miller, 'Joseph Banks, Empire and "Centers of Calculation" in Late Hanoverian London', in *Visions of Empire: Voyages, Botany and Representations of Nature*, ed. David Miller and Peter Reill (Cambridge, 1996), 21–37.

A striking example of this model of observation is represented in William Burchell's portrait of his wagon, a sort of mobile laboratory in which he travelled as a naturalist across southern Africa in 1810–15.²⁸ This small sketch, now in the possession of the Oxford Museum of Natural History, finds room for all kinds of instruments – compass, telescope, thermometer, weighing scales, writing and drawing materials, maps, specimen cases, plant press, rifle and pistols – as well as botanical and zoological specimens, a library of works of natural history (fifty volumes in all), charts, maps, ethnographic portraits, flag, hammock and a flute. Burchell's mobile home, adapted from the standard Cape ox-wagon, itself functioned as an instrument, the rotations of its wheels providing a means of calculating the distances travelled each day. As an instrument, the wagon was not merely designed to serve the needs of metropolitan science, its disarticulated construction was also well adapted to the uneven terrain: global functions calibrated to local conditions. Of course, like any savant's cabinet, the space of the wagon was not actually as self-sufficient as it appeared. Burchell depended throughout his travels on the labours of numerous servants, the health of his oxen, and his constant negotiations with Boer farmers and black Africans alike. Traces of some of these transactions may be detected in the presence of porcelain beads amongst the baggage of the travelling naturalist. (Burchell carefully noted in his published narrative that the black, white and blue were more sought after than the red or transparent).²⁹ Yet the sketch itself presents a contained view, looking in, not out: it is an interior space, the cabinet transposed to the field.

The task of collecting, sketching, cataloguing and describing nature's forms demanded a variety of different sorts of skill, as well as considerable resources of time and money. William Burchell, for example, relied heavily on family income to sustain himself during his travels in South Africa and Brazil, and devoted decades of his life to the task of comprehending his collections. It took him a full three years to unpack and re-arrange the 49,000 botanical specimens gathered in his five-year journey through Brazil, and he spent four more years re-labelling them.³⁰ His skills as an observer of nature were not merely cognitive or conceptual: he was also an accomplished draughtsman, as is evident from the drawings which survive in the archives at Kew and elsewhere. One notable example is his sketch of a hermit crab from St Helena, where he spent five years between 1805 and 1810 (Figure 2). The depth and detail of the colouring in this image bears witness to Burchell's commitment to visual precision in the depiction of the forms of nature. As Luciana Martins and I have

²⁸ The image is discussed in Driver, *Geography Militant*, 17–19.

²⁹ Burchell, *Travels in the Interior of Southern Africa* (2 vols., 1822–4), I, 119, II, 400.

³⁰ Edward Poulton, *William John Burchell* (1907), 54–5.



Figure 2 William J. Burchell, 'Hermit Crab', n.d., St Helena plants, 52. By permission of the Director and the Board of Trustees of the Royal Botanic Gardens, Kew.

argued elsewhere, such drawings are not simply accurate illustrations or representations: they also constitute material evidence in themselves, specimens by proxy.³¹

Burchell's attempt to make a permanent record of his observations in the field, through both the preservation of specimens and the creation of proxies, exemplifies a wider process through which knowledge was being transmitted from the field to the centres of metropolitan science. It is important to note, however, that the means and methods of observation in the field were by no means self-evident. For reports from the field to be credible from the perspective of the scientific establishment, travellers had to learn not only *what* to look for, but also *how* to observe: and this meant following rules – or what might well in this context be called 'observances'. Hence the burgeoning discourse on field observation during the first half of the nineteenth century, including manuals for surveyors, instructions to naval officers and field guides for zoologists, entomologists, botanists, geologists and geographers. The common thread within this instructional literature was the belief that, as William Herschel had put it, 'seeing is . . . an art which must be learnt'.³² The proper conduct of observation – in sketching or in collecting, for example – required training not only of the eyes, but also of the hands, the feet, and indeed of the whole body of the observer. It was a matter of both appropriate equipment and correct comportment, a disciplining of the senses: there was certainly much more to observing than just looking. Yet the precise manner in which field observations were to be carried out was still a matter for debate, as the fraught history of many of these publications indicates. On my reading, for example, the Royal Geographical Society's celebrated manual, *Hints to Travellers*, appears less as a coherent assertion of a geographical way of seeing, than a fragile attempt to resolve some fundamental dilemmas about the means and status of observation in the field.³³

III

One of the main inspirations for *Hints to Travellers*, first published in 1854, were the instructions which had long been issued to naval officers conducting surveying expeditions and voyages of exploration. This is in itself unsurprising given the substantial maritime contribution to the development of natural science generally, and the field of geographical knowledge in particular, during the eighteenth and nineteenth centuries.

³¹ Luciana Martins and Felix Driver, 'The Struggle for Luxuriance: William J. Burchell Collects Tropical Nature', in *Tropical Views and Visions*, ed. Felix Driver and Luciana Martins (Chicago, in press).

³² William Herschel, cited in Greg Denning, *Readings/Writings* (Melbourne, 1998), 8.

³³ 'Hints to Travellers', ed. Robert Fitzroy and Henry Raper, *Journal of the Royal Geographical Society*, 24 (1854), 328–58; Driver, *Geography Militant*, 49–67.

In the British context, the Royal Navy provided logistical support to major scientific expeditions: indeed many of the most *avant-garde* scientific programmes of the day – from terrestrial magnetism to astronomy – were unimaginable without it. Key Admiralty officials like John Barrow and Francis Beaufort played a notable role in the founding of the Royal Geographical Society, as they did also in discussions over exploration at the Royal Society and the British Association for the Advancement of Science. These institutional and individual connections matter a great deal to the development of the field sciences during this period, as many historians have pointed out.³⁴ In the present context, though, my focus is on the connections between the practices of maritime observation and the developing epistemology of observation in the field. The log-book and the sketch-book of the navigator, just as much as those of the naturalist, provided the means of apprehending the experience of travel through unfamiliar territory; they were mobile tools of knowledge, designed to register observations in a standard and consistent manner. Their contents tell us much about contemporary practices of field observation, and what happened to them in the process of circulation through the maritime world.

Figure 3 shows a page from a log-book kept by midshipman John Septimus Roe on a voyage from England to New South Wales in 1817.³⁵ The page contains routine observations made on departure from the harbour at Rio de Janeiro, a common port of call for British ships during this period, including a sketch of the fort at Santa Cruz and a topographic profile of the Sugar Loaf and adjacent coastal features. While they have been considerably re-worked, the basic form of these drawings reflects a routine feature of maritime observation. The ability to render in graphic form the dimensions, detail and colour of coastal landscapes was after all an essential aspect of the surveyor's task.³⁶ The coastal view was an integral component of maritime charts and log-books, part of a common visual code rendering the maritime world intelligible to navigators. In some respects, then, these images represent a way of seeing the maritime world from the point of view of the British coastal surveyor, part of a much wider network, coordinated from the Admiralty, through which the naval empire was secured. More particularly, in this

³⁴ Miller, 'Revival of the Physical Sciences'; Janet Browne, 'Biogeography and Empire', in *Cultures of Natural History*, ed. Jardine *et al.*, 305–21.

³⁵ Roe's log-book images are discussed at length in Felix Driver and Luciana Martins, 'John Septimus Roe and the Art of Navigation, c. 1815–1830', *History Workshop Journal*, 54 (2002), 144–61. The summary here draws on Driver, 'Imagining the Tropics: Views and Visions of the Tropical World', *Singapore Journal of Tropical Geography*, 25 (2004), 10–11.

³⁶ Andrew David, 'Coastal Views', in *The Charts and Coastal Views of Captain Cook's Voyages: The Voyage of the Endeavour 1768–1771* (1988), xxxviii–xli; Luciana Martins, 'Navigating in Tropical Waters: British Maritime Views of Rio de Janeiro', *Imago Mundi*, 50 (1998), 141–55.

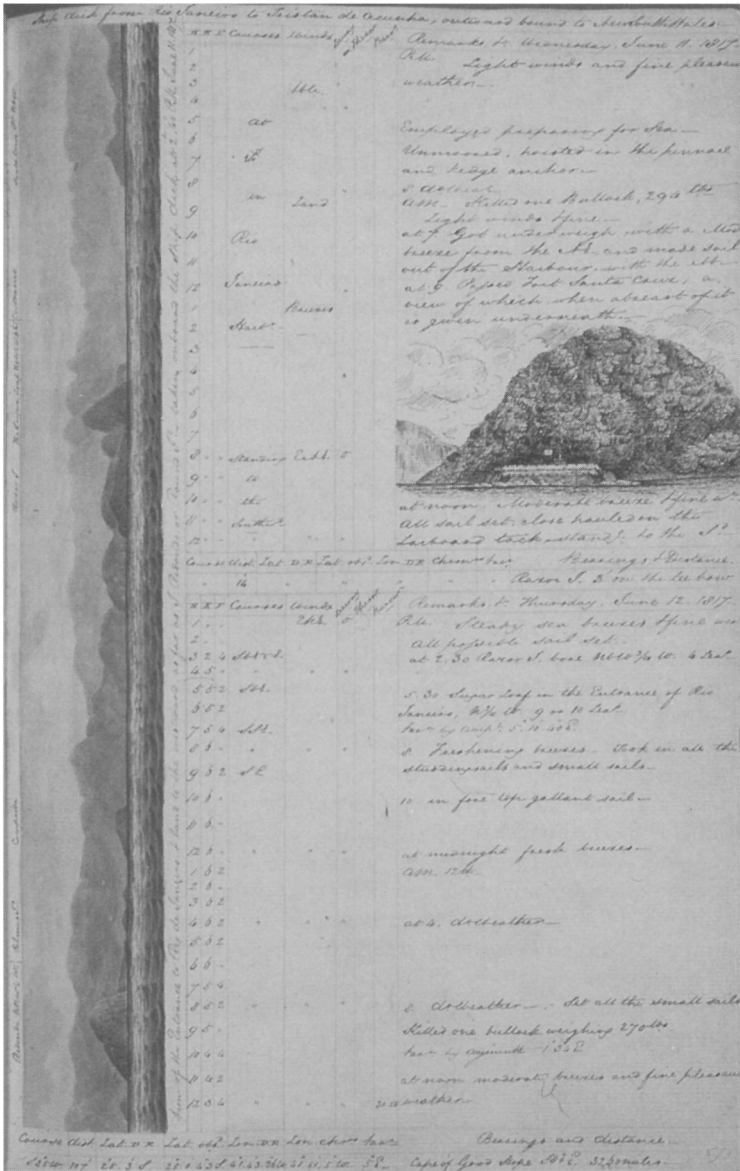


Figure 3 John Septimus Roe, observations at Rio de Janeiro, June 1817, from the log-book of the Dick. By permission of the Battye Library, Perth.

instance, they reflect Roe's prior training in the arts of drawing and mapping at Christ's Hospital school, and the subsequent development of his technique at sea, which is evidenced in his surviving correspondence during this period.³⁷ The log-book itself, of course, had a key role to play in both the practice of navigation and the politics of naval discipline. Its format in a sense mirrored the strict spatial organisation of the ship: every little bit of information had its proper place, the entries so designed to make optimum use of the available space.

Seen in this way, the log-book appears as a local version of Admiralty writ. But there are other ways of reading these images, in which the experience of disturbance comes more clearly into view. For one thing, such log-books could express more personal aspirations, insofar as drawing – like writing – offered a means of self-advancement to aspiring midshipmen and officers. Many of Roe's surviving log-books are immaculately produced, including ornate frontispieces clearly designed to impress his superiors and his relatives. The cultivation of his skills as a draughtsman needs to be seen in the wider context of the intense competition for naval posts in the post-1815 era. For six years from 1817, Roe worked under the supervision of Phillip Parker King, undertaking a coastal survey of Australia. King had been specifically instructed by the Admiralty to supervise Roe's drawing and colour-washing on the journey out to Australia.³⁸ The physical labour of drawing, mapping and sketching is painfully visible in Roe's correspondence to his family during this period. Throughout his early naval career, he never ceased to lament the effect of constant observation, sketching and drawing on his overworked eyes. In December 1818, writing from Port Jackson, he complained that 'My sight has been so much impaired by constantly looking out, since my being employed in this service, that I now find it difficult to distinguish objects plainly without the aid of a glass.'³⁹ Apart from his books and drawing instruments, it seems that Roe's most precious possession was the eye-water made up to his mother's recipe. The intensity of the tropical sun, as well as the countless hours spent confined in candle-lit cabins preparing his charts, would strain even the most imperial eye.

The sketches of the naval surveyor, then, take on a rather different meaning when seen in the context of the field, or on board ship. In Roe's case, they appear as both laborious experiments in a way of seeing and as the far-from-certain means of an attempt to secure a place in the world.

³⁷ Driver and Martins, 'John Septimus Roe', 146–53.

³⁸ State Library of Western Australia, John Septimus Roe Papers: J. S. Roe to J. Roe, 21 Apr. 1817; M. Hordern, *King of the Australian Coast: The Work of Phillip Parker King in the Mermaid and Bathurst, 1817–1822* (Melbourne, 1997), 24, 26.

³⁹ Roe Papers, J. S. Roe to J. Roe, 7 Dec. 1818.

Of necessity, naval survey had imperial functions: but its power was far from guaranteed in advance. In this context, it is also worth considering what happens when disturbance becomes catastrophe: as in the case of shipwreck, for example, when global networks of maritime knowledge and power are momentarily shattered. The fragility of the human condition, and specifically the limits to worldly knowledge and power, are of course recurring themes in accounts of maritime disaster across the ages. Here I am more particularly concerned with the challenge posed by such events to the project of charting the world, and the role of text and image in rendering them knowable. If a maritime voyage could be conceived as a sort of travelling experiment, as we have seen in the writing of John Herschel, then the loss of its principal instrument – the ship itself – clearly demanded an explanation. And in the naval context, perhaps above all others, narratives of cause and effect were closely connected to the attribution of responsibility and blame.

On 4 December 1830, the forty-six-gun frigate *Thetis* sailed out of the harbour of Rio de Janeiro bound for England with a large quantity of bullion on board.⁴⁰ The next day, on a calm but foggy night, the vessel smashed full-sail into the cliffs of Cabo Frio Island, with the loss of 28 of the 300 men on board. The wreck puzzled many commentators, as the island was a well-known landmark and sailing conditions had been unexceptional. While the ship's captain attributed the disaster to 'the wonderful and extraordinary nature of the current', unmarked on any chart, the subsequent and inevitable court martial blamed him for relying solely on dead reckoning and making insufficient allowance for the effect of strong southerly winds on sea-currents.⁴¹ But these were not the only explanations canvassed. A matter of weeks after the court's verdict, Professor Peter Barlow, an authority on terrestrial magnetism, read a paper at the Royal Society arguing that the effects of 'local attraction' on the ship's compass caused by the increasing use of iron in naval construction would be sufficient to account for the loss.⁴² Subsequently, further accounts of the drawn-out salvage operations were read at the Royal Society, particular attention being paid to design of a number of diving bells, air pumps and a large derrick. Numerous charts of the site, and drawings of the wreck itself based on underwater sketches made in

⁴⁰ The following summary is drawn from a longer study: Felix Driver and Luciana Martins, 'Shipwreck and Salvage in the Tropics: The Case of H. M. S. *Thetis*, 1830–1854' (unpublished paper, 2003).

⁴¹ Public Record Office, Court Martial Papers, 'Narrative of the Loss of H.M.S. *Thetis*', by Captain Samuel Burgess, 15 Mar. 1831, and 'Court Martial Judgement', 21 Mar. 1831, ADM 1/5476.

⁴² Peter Barlow, 'On the Errors in the Course of Vessels Occasioned by Local Attraction; with Some Remarks on the Recent Loss of His Majesty's Ship *Thetis*', *Philosophical Transactions*, 121 (1831), 215–21.

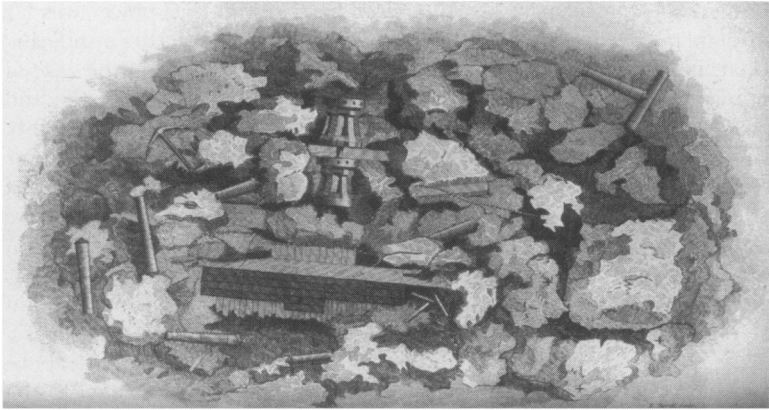


Figure 4 'The Remains of His Majesty's Late Ship, Thetis, Wrecked at Cape Frio, 4 December 1830, Sketched from the Diving Bell 23 November 1831', *Nautical Magazine* (1832), 126.

diving bells, accompanied progress reports despatched to the Admiralty and the Royal Society, and some found their way into the press (Figure 4). And at least one marine artist was tempted to join the imaginative plunder: John Christian Schetky produced two paintings in oils, under the title 'Salvage of Stores and Treasures from H.M.S. Thetis at Cape Frio' (1833), now held at the National Maritime Museum. One depicts the orderly efforts of the salvage team, ant-like creatures working with derrick and bell, dwarfed by spectacular cliffs; the other appeals to the sublime forces of nature as a stormy sea rages beneath the suspension cables.

Accounting for such a loss was an essential, if contested, part of making maritime knowledge. To rectify the disturbance represented by the wreck of a ship, various different kinds of imaginative work were required. The loss and salvage of the *Thetis* yielded a treasure trove of images, in the form of sketches, maps, charts, diagrams and paintings, as well as a wealth of narratives which steadily multiplied in the weeks and months following the event. The story-telling did not stop here, as legal disputes over the salvaged treasure continued for a quarter of a century. From the perspectives of science, government and commerce, a moment of catastrophic failure had first to be represented, and then accounted for. If the experiment of navigation had failed, in this case catastrophically, the sources of error had to be rendered intelligible, whether they were human (the failure to keep proper observations) or physical (the effects of local attraction): and in either case, there were lessons to be learned. The Admiralty, for its part, initially treated this like every other shipwreck as a disciplinary matter. The purpose of the court martial was to measure

individual culpability through examination and combination of all the available evidence, including competing narratives of the event and visual sketches of the site. The same narratives and images were subsequently enrolled in drawn-out legal proceedings over the division of the spoils from the salvage, though here the case turned on questions of credit rather than culpability. Shipwreck narratives and imagery in other contexts could represent maritime catastrophe in the poetic registers of heroism, tragedy or retribution. With the *Thetis*, however, much more was invested in the story of its salvage than that of its loss.

IV

In recent years, historians have drawn attention to the sheer ambition of the naturalists, navigators and explorers of the age of enlightenment, who extended the reach of British power and knowledge across every continent.⁴³ They brought into existence vast collections of information, and great empires of learning, presided over by influential figures such as Joseph Banks, Roderick Murchison and Joseph Hooker. Theirs was an essentially imperial vision, in which the explorer's role was to fill in the blanks: as keepers of the imperial archive, they would do the rest. Yet these same archives reveal evidence of something more, beyond both imperial ambition and planetary consciousness: in a word, evidence of disturbance. Jonathan Lamb, referring to eighteenth-century voyages of discovery, expresses it thus:

The commanders of these expeditions may have been committed to large and comprehensive views, and believed devoutly in systems of classification and cadastral measurement; but their data proved intractable, their experiments prone to failure, and they became periodically distracted, behaving unlike themselves owing to the stress of isolation, disease, fear – and occasionally exquisite pleasure.⁴⁴

In this essay, I have highlighted some of the diverse meanings of disturbance for nineteenth-century travellers. The fictional Archibald Potter was thus brought to life in 1873 by Winwood Reade in order to dramatise the curative effects of travel on metropolitan disturbance: in this case it was proximity and not distance which was truly unsettling. Reade attempted to make his own reputation as a scientific explorer, in the wake of his better-known contemporaries, but he found only disappointment. Sixty years earlier, William Burchell had gone to incredible lengths to minimise the disturbing effects of travel, carrying with him instruments

⁴³ *Visions of Empire*, ed. Miller and Reill; Robert Stafford, *Scientist of Empire: Sir Roderick Murchison, Scientific Exploration and Victorian Imperialism* (Cambridge, 1989); Matthew Edney, *Mapping an Empire: The Geographical Construction of British India, 1765–1843* (Chicago, 1997); Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven, 2000).

⁴⁴ Lamb, *Preserving the Self*.

of every description, as well as the latest authorities in the form of books, as protections against the wild. His wagon, remember, was especially built in order to minimise the stresses and strains of the journey: it was designed, quite literally, as a mobile shock-absorber. But in the end, Burchell succeeded only too well as a collector, and failed as a philosopher: overwhelmed by his vast collections, he lost his reason. In 1863, after decades of unpacking, labelling and re-packing his specimens, he ended his own life. The verdict of the jury was 'suicide during temporary insanity'.⁴⁵

In comparison with Burchell, John Septimus Roe was a lowly figure in the ranks of science, without a private income to support him. His route through the establishment was arduous but ultimately successful, and following his retirement from the Navy he went on to become surveyor general of Western Australia, a post he held until 1870. One measure of disturbance for Roe was his estimate of the physical effects of his labours on behalf of the imperial state. Clearly the business of survey came at a cost: as he recorded impassively in his letter of resignation, 'whilst actively employed in the Public service the sight in one eye has been completely destroyed, that of the other eye very much damaged, the head has twice been severely injured, as also the left hand, and incurable hernia has been contracted whilst forcing [*sic*] almost impenetrable country'.⁴⁶ If Roe's sense of disturbance was absorbed into his own body, the loss of a ship was a matter which demanded a quite different sort of response. The multiple accounts of the wreck and salvage of the *Thetis* provide some measure of the different ways in which institutions and individuals attempted to absorb and to exploit the shock of disturbance through the telling of stories and the making of images.

Each of these examples draws our attention to the ways in which the traveller's knowledge itself travels and what this entails, from the labour of observation to the mobilisation of trust. The imperial eye sees in this process a more or less coherent network through which information circulates before finally becoming translated into settled knowledge. But there are other stories, presented here through the figure of disturbance, in which knowledge is anything but settled. To put this another way, as far as the traveller is concerned, the jury is always out.

⁴⁵ Poulton, *Burchell*, 55–6.

⁴⁶ Driver and Martins, 'John Septimus Roe', 159.