

## Introduction

# Placing Global Knowledge in the Nineteenth Century

Diarmid A. Finnegan and Jonathan Jeffrey Wright

In the late eighteenth century, the world became simultaneously smaller and larger. Smaller, in the sense that European (and particularly British) imperial expansion encompassed ever more remote and unexplored parts of the globe, establishing tentative connections between metropolitan cores and colonial peripheries that would be strengthened in the century to follow; and larger, in the sense that this process of exploration revealed cultures, species and other phenomena that had, hitherto, lain beyond the bounds of ‘western’ knowledge. In short, as attention was turned to the opportunities that existed in regions unexplored by Europeans and the world became, in geographical terms, *terra cognita*, it became clear that there was much more, in scientific and ethnographic terms, to know.<sup>1</sup>

This process is, of course, illustrated by the well-known Pacific voyages of Captain James Cook. As James M. Hodge notes, these voyages, which combined exploration, imperial expansion and scientific observation, ‘have been seen by many as signalling the beginning of a novel phase in European exploration, setting new standards for the scope and accuracy of surveying and empirical observation’.<sup>2</sup> The first of Cook’s three voyages provides a case in point.<sup>3</sup> Leaving Britain in 1768, Cook sailed first for Tahiti where his expedition was tasked with recording the Transit of Venus across the Sun.<sup>4</sup> Famously, Sir Joseph Banks joined Cook in the capacity of ‘official botanist’, bringing with him ‘a mass of equipment’ and ‘an eight-man natural history “suite”’, whose number included his close friend,

---

1 Joseph M. Hodge, ‘Science and Empire: An Overview of the Historical Scholarship’, in *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800–1970*, ed. Brett M. Bennett and Joseph M. Hodge (Basingstoke: Palgrave Macmillan, 2011), 5–7.

2 Hodge, ‘Science and Empire’, 5.

3 The literature on Cook is extensive, but see, for an overview of his life and changing reputation, Glyn Williams, *The Death of Captain Cook: A Hero Made and Unmade* (London: Profile, 2008). The following account of his first voyage draws primarily on Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science* (London: Harper Press, 2009), 1–59. But see also Hodge, ‘Science and Empire’, 6, and Miles Ogborn, *Global Lives: Britain and the World, 1550–1800* (Cambridge: Cambridge University Press, 2008), 295–328.

4 Holmes, *Age of Wonder*, 5.

Dr Daniel Solander.<sup>5</sup> While at sea, Banks occupied himself with fishing, shooting and scientific study, and upon arrival at Tahiti he composed a wide-ranging journal, rich in ethnographic detail, and gathered numerous zoological and botanical specimens.<sup>6</sup> This process of collecting continued as the expedition moved on to Australia and New Zealand, and when they arrived back in Britain in 1771 Banks and Solander brought with them ‘over a thousand new plant specimens, over five hundred animal skins and skeletons, and innumerable native artefacts’.<sup>7</sup> But if the *Endeavour* voyage was important in scientific terms, it was important also in imperial terms. That Banks, later portrayed as the ‘the staunchest imperialist of the day’, was present on the voyage is, in itself, significant, as is the fact that the expedition had an overtly imperial mission.<sup>8</sup> In addition to tracking the Transit of Venus, it was instructed by the British admiralty to investigate claims that New Zealand formed the tip of an unexplored southern continent. If true, Cook was directed to map this continent and claim it for the British.<sup>9</sup>

Cook’s first Pacific voyage thus provides a striking example both of European exploration, and of the interrelation of imperial expansion and knowledge construction, but it is just one of many such examples. The *Endeavour* was not, for instance, the first European ship to visit Tahiti: Captain Wallis’ *Dolphin* had done so in 1767, and the French arrived in 1768.<sup>10</sup> Moreover, the Pacific was not the only ocean to be explored at this time. The Atlantic and Arctic Oceans were also explored and Cook and Banks had first met on a voyage to Labrador and Newfoundland.<sup>11</sup> Reflective of ‘an international movement in the spirit of the Enlightenment’, such voyages were not simply concerned with exploring unknown quarters of the world, but with bringing those quarters ‘cartographically, anthropologically, botanically, zoologically, and geologically within the bounds of European science’.<sup>12</sup>

\* \* \*

This volume addresses the phenomena – imperial expansion, global connection and constructions of knowledge – so neatly linked in the exploratory voyages of the late eighteenth century. Yet, while taking these staple concerns as a given, the chapters also push beyond such well-known instances of a ‘global’ quest for knowledge both in empirical and conceptual terms. Although differing in focus,

5 Holmes, *Age of Wonder*, 10.

6 Holmes, *Age of Wonder*, 1, 6–7, 20–21, 29–30.

7 Holmes, *Age of Wonder*, 43.

8 David N. Livingstone, *Putting Science in its Place: Geographies of Scientific Knowledge* (Chicago: University of Chicago Press, 2003), 174.

9 Holmes, *Age of Wonder*, 10.

10 Holmes, *Age of Wonder*, 3.

11 Holmes, *Age of Wonder*, 9; N.A.M. Rodger, *The Command of the Ocean: A Naval History of Britain, 1649–1815* (London: Penguin, 2006), 327–8.

12 Rodger, *The Command of the Ocean*, 327; Livingstone, *Putting Science in its Place*, 10.

methodology and disciplinary orientation, the chapters that follow work with and against the composite and contested category of 'global knowledge' and explore the numerous ways and places in which such knowledge was constructed, communicated and contested during the long nineteenth century. This raises an obvious definitional question: what, exactly, might be meant by the phrase 'global knowledge'? But before addressing this question, the volume's chronological focus deserves brief comment.

Broadly speaking, *Spaces of Global Knowledge* focuses on the 'long nineteenth century'. As much recent scholarship in history and historical geography has demonstrated, this era, which stretched from the late eighteenth to the early twentieth century, was one that was characterised by imperialism, exploration and economic exploitation, and that brought with it a huge increase in the creation and crossing of cultural and intellectual boundaries. It was, in C.A. Bayly's influential analysis, an era which witnessed the development of 'global *uniformities* in the state, religion, political ideologies, and economic life' and the emergence of the interconnected, modern world we know today.<sup>13</sup> Of course, it goes without saying that imperial expansion and global interconnection were in no sense unique to the long nineteenth century. The expansion of European empires can be traced back to the renaissance and it is widely accepted that globalisation has a long 'prehistory', even if the nature of that prehistory has been subject to debate.<sup>14</sup> To give just a few examples, Immanuel Wallerstein famously posited the emergence of a 'modern world-system' in the mid sixteenth century, linking it to the development of the Spanish and Portuguese empires, and Miles Ogborn has, more recently, adopted a similar chronology.<sup>15</sup> While alive to the elisions inherent in sweeping arguments relating to the emergence 'of a single capitalist world system whose changing geography of core, periphery and semi-periphery defines the fortunes of different parts of the globe', Ogborn concedes that the world *did* change 'between the sixteenth and eighteenth centuries', and that it was during the sixteenth century that England, under Elizabeth I, 'stepped – or rather, sailed – on to the global stage', if only as 'minor players' in a game still dominated by the Spanish and the Portuguese.<sup>16</sup> Indeed, Bayly concedes the existence of 'older networks and dominances created by geographical expansion of ideas and social forces from the local and regional level to the inter-regional and inter-continental level', characterising these as 'archaic' and 'early modern' globalisations.<sup>17</sup>

---

13 C.A. Bayly, *The Birth of the Modern World, 1780–1914: Global Connections and Comparisons* (Oxford: Blackwell, 2004), 1.

14 Jürgen Osterhammel and Niels P. Petersson, *Globalization: A Short History* (Princeton: Princeton University Press, 2005), 28.

15 Osterhammel and Petersson, *Globalization*, 28, 31; Immanuel Wallerstein, *The Modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (New York: Academic Press, 1974).

16 Ogborn, *Global Lives*, 1, 4, 16.

17 Bayly, *The Birth of the Modern World*, 41–2.

As long and complex as its prehistory is, however, it is difficult to escape the conclusion that, in European perspective, from around the late eighteenth century (the era of Cook's voyages) onwards, the process of global interconnection accelerated.<sup>18</sup> War and imperial expansion drew and redrew global political geographies and opportunities for voyaging, discovery and transcultural encounter and exchange were created that, if not unprecedented, were arguably greater than at any time in human history. Notwithstanding his identification of its archaic and early-modern antecedents, globalisation remains, for Bayly, primarily a feature of the long nineteenth century, whether understood in the sense of 'growing interconnectedness' or, more problematically, of 'growing uniformity'.<sup>19</sup> Likewise, while agreeing with Wallerstein that 'the beginning of a basically irreversible process of worldwide integration' can be identified in the early sixteenth century, Jürgen Osterhammel and Niels P. Petersson argue that 'from about 1750 to 1880' there occurred 'an expansion of worldwide integration unprecedented in its intensity and influenced by the new capacities in production, transportation, and communication created by the Industrial Revolution'.<sup>20</sup>

The making, circulation and reception of knowledge – the theme with which this book is concerned – was, of course, central to this process of worldwide integration, whether manifest in the expansion of formal empires, the creation of informal empires and spheres of influence or the intercultural processes of exhibition, encounter and exchange that imperial enterprise occasioned. Hand in hand with the expansion of imperial power and 'western' influence came attempts both to 'know' the wider world, and, indeed, to inform and educate it. Thus, alongside the ubiquitous administrators and soldiers, the global world of the nineteenth century was one populated by missionaries, merchants and explorers (at times one and the same), doctors and cartographers, engineers and botanists. Yet these were not, of course, the only actors. Representatives of non-western populations were not simply the passive recipients of attempts to spread 'civilisation', but historical actors who could – and did – exert agency in their cultural and political encounters with occidental others. Such actors, western and non-western, connected and networked the global world of the nineteenth century, and it is their life-geographies, practices and varied contributions to knowledge – be they medical or botanical, cartographic or cultural – that constitute the focus of this volume. Through the activities of this range of actors, knowledge of the world was constructed, communicated and contested in ways that helped to multiply and reinforce already burgeoning global connections and trans-cultural contacts.

If the long nineteenth century can be usefully characterised as a global age this points to the possibility of identifying in that period a developing global knowledge

---

18 We are aware that we have not escaped from a largely European temporal frame of reference and acknowledge that any periodisation is inescapably perspectival and open to contestation.

19 Bayly, *The Birth of the Modern World*, 2.

20 Osterhammel and Petersson, *Globalization*, 28.

economy. Yet the meaning of the category suggested by this possibility – ‘global knowledge’ – is not easily determined. Here we take such definitional indeterminacy as an opportunity for critical inquiry rather than analytical paralysis. As a point of departure, global knowledge might be understood in at least two ways. First, it can be defined as a form of knowledge that moves between and beyond multiple and widely dispersed territories or locales and connects individuals or institutions distributed across the world. That definition, rather than confirming the idea of knowledge as universal truth, can be used to raise questions about how knowledge was transported through global space, in what form and in whose interests. Exploring such questions can highlight the ways in which knowledge exceeded as well as expressed the aims of one dominant group or prevailing political arrangements. Global knowledge, in escaping the confines of certain territorial logics, might be taken to name the results of inquiries that were either ‘trans-imperial’ or, indeed, ‘more-than-imperial’ in nature.

A second definition takes global knowledge to refer to the investigation or pursuit of patterns, distributions or trends considered trans-continental or worldwide in extent by historical actors. This construal might be usefully deployed to draw attention to motivations and mental constructs more than ‘actual’ worldwide connections, inter-cultural contacts and long-distance communications and to point to a regulative ideal that was a commonplace characteristic of many knowledge enterprises in the long nineteenth century. The two senses are not, of course, entirely independent but together begin to prise open the range of meanings and research possibilities contained within the capacious and suggestive category of ‘global knowledge’.

Taking the global placement of knowledge and knowledge of ostensibly global phenomena during the long nineteenth century as a starting point directly connects this volume with a burgeoning literature on ‘global histories’. As has been often pointed out, this recent historiographical concern has emerged from an intellectual and cultural environment that takes the ‘global’ to be a crucial analytical term, a prime object of scholarly investigation and an urgent social and political issue. The resultant scholarly enterprise might be said to generate as well as scrutinise certain kinds of ‘global knowledge’. Not surprisingly, then, the turn to global histories has been regarded as at once promissory and problematic. On the one hand, crafting histories that locate particular episodes in a global context have been offered as a way to circumvent the dangers of parochialism that lurked within the valorisation of ‘contextual history’. In the words of one recent introduction, global history works ‘against the static geography of place in favour of a geography of linkages’ thereby overcoming historiographical myopia.<sup>21</sup> Adopting a global approach has also been presented as a strategy to overcome the privileging of particular global regions and as an opportunity to generate new ‘polycentric’ narratives of world history that are not bound with what Patrick O’Brien has called the ‘fishy glue of

---

21 Emily Rosenberg, *A World Connecting, 1870–1945* (Cambridge, MA: Harvard University Press, 2012), 8–9.

Eurocentrism'.<sup>22</sup> On the other hand, the enthusiastic rush to embrace the global has been criticised for smoothing over the profoundly unequal effects of political power and for ignoring the irreducible specificities of cultural difference.<sup>23</sup> Mike Hulme's argument that global climate science tends to produce a 'brittle' form of knowledge that cannot accommodate or do justice to genuine diversity can be more generally applied to all attempts to capture 'global' trends or processes of change.<sup>24</sup>

The opportunities and challenges of writing global histories of knowledge enterprises can be usefully elaborated by engaging with recent work in the history of science, a scholarly field particularly relevant to the empirical bearing of this volume. Following wider historiographical trends, historians of science have in recent years queried the discipline's limited geographical ambitions and scope. A widespread penchant for micro-histories of science that located the production or consumption of scientific knowledge in precise and carefully delimited local settings has been challenged by scholars wishing to reconstruct 'generalist' accounts of scientific change that do not presume a positivistic understanding of science as universal by definition, but which move beyond the limits of highly detailed case studies.<sup>25</sup> Alongside this, a concern with understanding how science became a quintessentially mobile form of knowledge that apparently travelled with unique efficiency across various kinds of boundaries has further encouraged a move towards global histories of science.<sup>26</sup> As a result, calls have been made to study the 'circulating practices' of global communication as a crucial context for understanding the spread and influence of scientific knowledge.<sup>27</sup> Others have echoed this and suggested 'scaling up' histories of particular scientific practices or objects of inquiry by examining both how global claims about natural phenomena have been constructed and how scientific projects exploited and expanded global networks and infrastructures in the past.<sup>28</sup>

Those interested in pursuing more globally orientated histories of science have also called for engagement with a widened and more heterogeneous repertoire of primary sources to allow for a 'cross-contextualisation' of very different sorts of

22 Patrick O'Brien, 'Historiographical Traditions and Modern Imperatives in the Restoration of Global History', *Journal of Global History* 1(1) (2006): 33.

23 Warwick Anderson, 'From Subjugated Knowledge to Conjugated Subjects: Science and Globalisation, or Postcolonial Studies of Science?' *Postcolonial Studies* 12 (2009): 389–400.

24 Mike Hulme, 'Problems with Making and Governing Global Kinds of Knowledge', *Global Environment Change* 20(4) (2010): 558–64.

25 For example, Robert E. Kohler, 'A Generalist's Vision', *Isis* 96(2) (2005): 224–9.

26 For one example of this, see Steven J. Harris, 'Long-Distance Corporations, Big Science, and the Geography of Knowledge', *Configurations* 6(2) (1998): 269–304.

27 James Secord, 'Knowledge in Transit', *Isis* 95(4) (2004): 654–72.

28 See, for example, Jeremy Vetter, ed., *Knowing Global Environments: New Historical Perspectives on the Field Sciences* (New Brunswick, NJ: Rutgers University Press, 2011).

ideas, practices and knowledge communities.<sup>29</sup> This archival move has been offered as a way to subvert over-reliance on records that reinforce a view of science's global trajectories and worldwide developments from 'the West' or from self-designated centres of imperial power. The conceptual lexicon of this kind of global history includes such terms as contact zone, hybridity, go-betweens, networks and assemblages. If those concepts derive in part from post-colonial theory, they are redeployed to look beyond the structuring effects of colonial relations, to 'fragment' knowledge traditions and bring to view the 'shifts and reinventions of a variety of ways of doing science across the world'.<sup>30</sup> The proposed aim, in other words, is to find ways of writing the history of science outside the 'limitations of a single national or imperial frame' that capture the 'itinerant' and 'extra-imperial' connections that shaped knowledge making activities in a global age.<sup>31</sup>

In this thinking, a global history of science offers a more inclusive account of knowledge construction than histories that, though adopting a critical stance, tend to remain within the terms of reference generated by the epistemic regimes of colonial power. Working against the 'bipolar vision' of postcolonial critique and concentrating instead on the 'fluid crossing of scales' by actors instrumental in the 'making of a planetary modernity' is suggested as a way to recover interactions and mediations that transgressed the standard dualisms of imperial imaginaries.<sup>32</sup> Proponents of this line of inquiry may risk eliding forms of resistance that were anti-global or deliberately disconnective, but argue nevertheless that it brings to view a much wider set of actors that functioned within, and made possible, global economies of knowledge.<sup>33</sup>

A more concrete expression of the global turn in the history of science can be found in one of most lively areas of interest in the history of science, the so-called Darwin industry. A key moment was the appearance of a series of articles published in *Nature* during the anniversary year of 2009 under the rubric of 'global Darwin'.<sup>34</sup> James Secord, using the same designation, further developed the argument that Darwin and Darwinism can be productively and provocatively set within a globalising nineteenth-century world. As Secord observes, Darwin

---

29 Sujit Sivasundaram, 'Science and the Global: On Methods, Questions and Theory', *Isis* 101 (2010): 146–58.

30 Sivasundaram, 'Science and the Global', 155.

31 Neil Safir, 'Global Knowledge on the Move: Itineraries, Amerindian Narratives, and Deep Histories of Science', *Isis* 101(1) (2010): 133–45, 138.

32 Simon Schaffer, Lissa Roberts, Kapil Raj and James Delbourgo, eds, *The Brokered World: Go-Betweens and Global Intelligence, 1780–1820* (Sagamore Beach, MA: Science History Publications, 2009), xv, xix.

33 Schaffer et al., *Brokered World*, xxx.

34 Marwa Elshakry, 'Global Darwin: Eastern Enchantment', *Nature* 461 (29 October 2009): 1200–1201; Daniel Todes, 'Global Darwin: Contempt for Competition', *Nature* 462 (5 November 2009): 36–7; James Pusey, 'Global Darwin: Revolutionary Road', *Nature* 462 (12 November 2009): 162–3; Jürgen Buchenau, 'Global Darwin: Multicultural Mergers', *Nature* 462 (19 November 2009): 284–5.

himself was thoroughly embedded in worldwide networks of exchange not least ‘through the nineteenth century’s first and most significant global communication system – the post office’. Moreover, Darwin’s science – or, more concretely, his books – also crossed multiple political and linguistic boundaries and achieved a global influence. In tracking this movement, and in recording the response of readers in different parts of the world, Secord re-describes Darwinism as ‘an outcome of criss-crossing lines of communication between diverse and often scattered localities’ and as a ‘shared context’ for conversations about global cultural transformations.<sup>35</sup> As Secord notes, this move need not be set in straightforward opposition to more geographically circumscribed studies. The global movement of evolutionary texts can be understood as contributing to, rather than detracting from, the articulation of local differences. Whether or not this does justice to the conditioning effects of local circumstances remains an open question. As David N. Livingstone has argued, reactions to Darwin could be dramatically different even among scattered but strongly linked communities that shared very similar cultural assumptions.<sup>36</sup> In such cases, it seems to make more sense to bring local rather than global concerns to the fore.

Arguably, then, the danger remains that global history flattens the highly varied political and cultural topography of knowledge-making enterprises. This has certainly been the view of a number of critics of global histories of science. Warwick Anderson, for example, has referred to widespread talk of ‘global flows’ and ‘fluid’ movements as marking an uncritical ‘hydraulic turn’ among historians.<sup>37</sup> To Anderson, historical imaginations drawn by the lure of global history and forgetful of colonialism tend to evoke a world of relatively unencumbered agents and malleable power structures.<sup>38</sup> This, in turn, can be tied to new ‘meta-narratives’ that, while eschewing a view from nowhere, somewhat disingenuously offer a view from everywhere. As Claudia Stein and Roger Cooter have argued, even where there is an explicit sensitivity to the heterogeneity of past knowledge cultures, reconstructions made under the sign of the global, ‘implicitly reproduce and foster [that] unifying construct’.<sup>39</sup> Global history cannot help but return to a form of universal history.

35 James Secord, ‘Global Darwin’, in *Darwin*, ed. William Brown and Andrew C. Fabian (Cambridge: Cambridge University Press, 2010), 45, 51.

36 For a recent and detailed statement, see David N. Livingstone, *Dealing with Darwin: Place, Politics and Rhetoric in Religious Engagements with Evolution* (Baltimore: Johns Hopkins University Press, 2014).

37 Warwick Anderson, ‘Making Global Health History: The Postcolonial Worldliness of Biomedicine’, *Social History of Medicine* 27(2) (2014): 372–84.

38 For a related critique of the use of ‘circulation’ and ‘trading zones’, see Fa Ti Fan, ‘The Global Turn in the History of Science’, *East Asian Science Technology and Society* 6(2) (2012): 249–58.

39 Claudia Stein and Roger Cooter, ‘Visual Objects and Universal Meanings: AIDS Posters and the Politics of Globalisation and History’, *Medical History* 55 (2011): 85–108, 107.



According to this perspective, rather than global histories, what is desired are 'critical studies of globalist ambitions', a move that resonates with an approach to 'global knowledge' that regards it as a description of intent rather than of historical realities.<sup>40</sup> The emphasis should not be on an all-encompassing global context for knowledge making but rather on exposing the genealogies of ostensibly global claims and the conditions that make those claims possible and plausible in different times and places. As a result, the term 'global' shifts from being an analytical category to the naming of an aspiration held by historical actors or, as Samuel Moyn and Andrew Sartori put it, a 'category belonging to the archive'.<sup>41</sup> Figured thus, knowledge has never been, and never can be, properly global even if that impossibility has helped to structure and stimulate intellectual endeavour.<sup>42</sup>

Others have developed a more radical version of this claim. To Bruno Latour, for example, the global does not describe a larger scale or context in which to situate knowledge making enterprises. Instead it simply refers to 'another equally local, equally micro place ... *connected* to many others'.<sup>43</sup> Scale in general, for Latour, is not something given in advance and thus useful for developing an analytical framework but rather 'is the actor's own achievement'.<sup>44</sup> As a consequence, when 'the global' is appealed to Latour suggests raising such questions as 'In which building? In which bureau? Through which corridor is it accessible? Which colleagues has it been read to? How has it been compiled? ... Through which optics is it projected?'<sup>45</sup>

One response to this deconstructive move and methodological reorientation has been to suggest that global history remains, in heuristic terms, an effective way of identifying an approach that 'experiments with [contingent] geographical boundaries'.<sup>46</sup> In this view, there is no reason why 'the global' must denote an account of the 'whole earth' or refer to something that applies to, or is manifest at, every point on the planet. Rather, the global can be usefully employed to refer to relations and movements that are in more modest sense stretched across the world. And while it may be possible to substitute the term global with concepts such as intercultural or inter/trans-national, this arguably comes at a cost. A global approach, for example, may want to unsettle the privileging of national boundaries or focus on the crossing or transcending of other kinds of borders than those of the

---

40 Anderson, 'Making Global History of Medicine', 381.

41 Samuel Moyn and Andrew Sartori, 'Approaches to Global Intellectual History', in *Global Intellectual History*, ed. Samuel Moyn and Andrew Sartori (New York: Columbia University Press, 2013), p. 17.

42 For a related history of 'witnessing' the globe or earthly sphere over the *longue durée*, see Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2001).

43 Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005), 176.

44 Latour, *Reassembling the Social*, 185.

45 Latour, *Reassembling the Social*, 183, 187.

46 Moyn and Sartori, 'Approaches', 22.

nation-state. Equally, intercultural exchange can occur at a scale or in a form that hardly merits the description global.

However these methodological – even metaphysical – questions are settled, there are clear benefits to encouraging a greater sensitivity to the *historical geographies* of global knowledge or, as in the title of this volume, the *spaces* of global knowledge. Whether understood in a more radical sense or not, it remains productive to ask in what kinds of spaces were global claims transacted and along which specific long-distance route-ways were objects of knowledge transported. Further, there is value in seeking to ascertain and analyse the sorts of sites or settings produced through the encounters, forms of exchange and exhibitionary practices that attached to efforts to collect, classify and communicate knowledge of distant places or widely-dispersed objects. There is an opportunity, in other words, to integrate more fully insights from work on the historical geographies of knowledge into the writing of global histories.<sup>47</sup> If such integration tends to sit awkwardly with the grander ambitions of global histories by calling attention to the sometimes disruptive and resistant particularities of place and patterns of movement and through multiplying sites and forms of mobility in ways that defy easy summary, it can also enrich the spatial vocabulary available to the historian and encourage more careful thought about the meaning and use of geographical categories.

The pursuit of a more explicit geographical sensibility corresponds well to the fact that the chapters in this collection do not, in the end, operate with a fixed definition of global knowledge or a unitary understanding of what a global history of knowledge endeavours might entail. Indeed, for some contributors, a global orientation remains implicit and in others is ultimately relegated to the margins in terms of analysis and empirical focus. Putting the global ‘in its place’ or tracking the mundane and material movement of ‘universal’ claims can make macro-scale accounts seem fragile, fragmentary and finite – that is to say, not global in the sense in which the term is often used. For all that, the chapters, taken together, might be said to replicate the kind of spatial reach that can make the turn to global histories suggestive, transformative and inclusive. Indeed, the collection offers a provisional and partial outline map of the global knowledge economies that emerged and developed during the long nineteenth century. From this, it can be suggested that those dynamic economies relied upon, and fed into, global economic, political, cultural and technological regimes. At the same time, it also seems apparent that they were unevenly governed and pervasively if not exhaustively shaped by the sharp imbalances of power associated with intercultural contact in an imperial

---

47 For a full account, see Livingstone, *Putting Science in its Place*. For an overview, see Diarmid A. Finnegan, ‘The Spatial Turn: Geographical Approaches in the History of Science’, *Journal of the History of Biology* 41(2) (2008): 369–88; and for a recent set of essays informed by a concern with the spatialities of past scientific knowledge, see David N. Livingstone and Charles W.J. Withers, eds, *Geographies of Nineteenth-Century Science* (Chicago: University of Chicago Press, 2011).

age. These general points are worth bearing in mind in turning to synopses of the book's sectional divisions and individual chapters.

\* \* \*

The chapters that follow this introduction avoid a narrow definition of what global knowledge is or was, and question as much as utilise the concept. This, combined with the contributors' varied disciplinary backgrounds and thematic concerns, has produced a collection in which global knowledge is understood not just as knowledge *of* the globe, but as knowledge facilitated and disseminated *by* the processes of imperialism, exploration and exploitation which connected the global world of the nineteenth century. A range of additional factors unites the various contributions. Methodologically, for instance, all take the form of empirically grounded case studies that marry detailed archival research with broader thematic and conceptual reflection. Relatedly, all proceed on the assumption that nuanced case studies attending to local specificity are necessary in order to fully understand the broader processes by which global knowledge was constructed and contested. In this sense, the volume is characterised by a 'bottom up' perspective, which uses local specificity to shed light on global structures and processes, revealing the latter to be lived and experienced phenomena rather than abstract historiographical concepts.

Further commonalities between chapters are identified through the use of three sectional headings that signal some of the crosscutting themes animating the volume as a whole. The first section, 'encounters and identity', draws attention to the intimate connections between the processes of knowledge making and self-fashioning. Each of this section's chapters are centrally concerned with the fleeting or more sustained encounters experienced by British and American observers with natural and cultural environments profoundly different and distant from their home territories. Such encounters were mediated by a range of pre-formed identities but could also unsettle a coherent sense of self.

The interplay between distant influences and intimate encounter is readily apparent in Nuala Johnson's reconstruction of a year in the life of the colonial wife, botanist and artist, Charlotte Wheeler Cuffe. Cuffe's views of Burma, materially expressed in watercolour paintings, were the product not simply of her inherited sense of class and gender identity that travelled with her from Ireland to Burma but were also enlivened by the physicality of being in the landscape and by her interactions with Burmese people. Cuffe's own quite private knowledge-making activities, while certainly shaped by conventional colonial assumptions, cannot be fully accounted for without a painstaking excavation of the non-discursive and 'more-than-imperial' aspects of her observational practices.

The dynamic between colonial conventions and global movements and ostensibly more local exigencies and encounters also played out in the case of the two antiquarian fieldworkers that take centre stage in Polina Nikolaou's chapter. To understand the archaeological field investigations of Robert Lang and Luigi

di Cesnola, Nikolaou argues that attention needs to be paid to three overlapping spheres of influence: the institutions that set the intellectual framework for an emerging archaeological science, the Ottoman colonial authorities and Cypriot informants in the field. It was precisely encounters and negotiations with the latter two groups that proved crucial to the construction of Cyprus as an open field for archaeological investigation. The 'global' norms communicated by the British Museum were also essential in allowing knowledge to gain the necessary credibility to permit the transformation from field notes to scientific text. Here, of course, a certain scalar complexity is evident as we observe interactions between two different colonial regimes, British and Ottoman, both of which operated from a distance but in unequal ways. The 'global' knowledge of Lang in particular was not only grounded in close working relations with field observers but also mediated by colonial actors operating with regional as well as imperial interests in mind.

As well as attempting to overcome the frequently conflicting priorities of different groups at a range of scales, the pursuit of knowledge might be thought of as an impossible quest for a settled 'global' identity. As Diarmid A. Finnegan demonstrates in his chapter on the Belfast linen merchant and spider specialist, Thomas Workman, the well-worn route-ways marked out by commercial travel in the late-Victorian period could provide profoundly disturbing encounters that undermined a sense of mastery of global affairs. In order to cope with the disorientating effects of long-distance travel, Workman employed a classic technology of the self, diary writing. This was coupled with a growing interest in arachnology, a scientific pursuit that provided Workman with a set of descriptive routines that helped him not only to make sense of spiders wherever encountered but also to have confidence that the world was patterned in stable and knowable ways. For all that, Workman's global knowledge, whether of commercial opportunities or tropical spiders, did not always fare well even in the ostensibly more secure and confirmed spaces he occupied in Belfast.

As Angela Byrne shows in the final chapter in this section, the sheer fragility of global knowledge was yet more marked in the case of fur traders exchanging information with metropolitan centres a century or more earlier. Operating at the outer edges of a Euro-American intellectual community, knowledge produced through the practices of cultivation in Rupert's Land reflected and refracted the hugely vulnerable character of remote existence in the far north. Yet knowledge was pursued to shore up a scientific identity that might be recognised by cultivators of science operating according to ostensibly global standards at the metropolitan centre. If this, exceptions aside, tended to efface any transformative encounters with indigenous groups, it also provided a way to retain an identity otherwise imperilled by the drudgery and dangers of coping with extreme isolation. Attempts to produce a form of knowledge stable enough to keep open communication with London largely worked against the making of a more comprehensive and inclusive account of the sub-arctic.

If a concern with encounter and identity helps to capture something of the inner workings of knowledge made or marketed on a global stage, the focus of

section two on collection and display sheds further light on the mechanics behind the construction of global knowledge during the long nineteenth century. Sarah Millar's narrative of three celebrated voyages to explore the Pacific in the early nineteenth century provides striking examples of how scientific collecting at sea expressed as well as frustrated the global ambitions of ocean exploration. By taking the re-fitted naval ship as a space of operation in the production of a global ocean science, Millar shows how collecting specimens was at once a means of securing warrant for knowledge claims made at sea and a practice that could disrupt a crew's social cohesiveness. If a ship naturalist or crew member could in principle collect specimens from anywhere on the world's oceans and transport them to distant centres of knowledge, they remained thoroughly enmeshed in, and constrained by, the social and material orderings of shipboard existence.

A moving ship, then, both enabled and checked the making of global knowledge. Similarly, as Caroline Cornish demonstrates, the long-distance movements of a museum object could engender a sense of having the whole world in immediate view and disrupt that sense through the changing and sometimes conflicted meanings of an object severed from the cultural setting in which it was manufactured. Even when set within a stable museological framework, the potential for incommensurable meanings remained. The object in question – a model of an Indigo Factory sourced from West Bengal – continued to 'move' even while remaining firmly 'in place'. If anything the model, rather than communicating the confident global vision of colonial endeavour, confirmed a sense of uncertainty and impotence in the face of a ceaselessly changing world economy.

The Museum of Economic Botany that housed and displayed the model Indigo Factory was certainly informed by a global vision in terms of its collecting policies and curatorial ambitions. This was true, too, of museums established and managed by local scientific societies in an earlier period. Enrolling and equipping local citizens whose careers took them to distant places to collect and donate natural and ethnographic objects for display was a common goal. As Jonathan Jeffrey Wright details, this objective was given particularly clear expression by founding members of the Belfast Museum. In practice, this meant exploiting the connections forged through the imperial careerings of Belfast-born collectors, and it made manifest a version of cosmopolitanism informed by a Paleyite natural theology that not only provided collecting with a religious rationale but also underwrote a vision of humanity as a single and unified global community. Yet this global vision relied on more prosaic concerns and proved to have a limited shelf life. The 'exotic' nature of objects from distant places was thought important for attracting a large local audience, particularly one composed of members of the working classes. Success in this area was one way to deflect criticisms of elitism and to demonstrate the local value of a museum composed of what amounted to a rather eclectic set of collections that was, in real terms, far from global in any representative or comprehensive sense. That eclecticism was among the reasons why the global collecting policy of the Museum's founders was increasingly subject to criticism in the latter half of the nineteenth century.

Local objects began to be regarded as of greater pedagogic and scientific value than ‘foreign’ ones.

Whatever its fate, the desire to ‘collect the globe’ and put it to order was arguably one of the nineteenth century’s most characteristic intellectual products. As Robert Mayhew argues, the construction in the nineteenth century of global ‘imaginaries’ made through practices of collection and display was strongly rooted in shifting standards of ‘evidencing’ that marked the decades around 1800. The rise of what Mayhew describes as ‘empirical globalism’ was fully registered in the changes made to the second edition of Thomas Malthus’s *An Essay on the Principle of Population*. The ‘binary geography’ of the globe sketched in the first edition divided the world into two relatively distinct areas. In one, positive checks to population growth (hunger, war, disease) dominated while in the other, under the aegis of more advanced societies, preventive checks (late marriage, self-restraint, birth control) were to the fore. This global view was ostensibly based on information gathered from authoritative sources. In the first edition, however, Malthus does little to substantiate his claim that his account relied on the careful collection of evidence from recognised authorities. In the expanded second edition, however, Malthus goes to some length to rectify this by incorporating and acknowledging information from across the world gathered by trusted observers. One of the interesting ironies that Mayhew uncovers is that despite the wealth of information about the globe that Malthus collected and displayed in the second edition, his binary division between primitive and progressive parts of the world not only remained but was, if anything, sharpened. Undoubtedly, the collection and textual arrangement of ‘global information’ by Malthus were decidedly geo-political.

Like Mayhew, Karen Salt’s chapter keeps the politics of collection and display distinctly in view. Salt, in examining how artefacts, texts and images were deployed to counter mid-nineteenth-century efforts to undermine Haiti’s status as a *bona fide* nation-state also adds further weight and nuance to the argument that the meaning of displayed objects or images are never static but have an irreducible recalcitrance. Read in this way, Salt’s chapter offers a helpful segue into the third section of the book that gathers together the final three chapters under the rubric of circulation and translation. While certainly concerned with how particular objects and images displayed the legitimacy of Faustin I’s imperial rule and of Haiti’s place within the polity of nations, Salt also interrogates the politics and power manifest in the trans-Atlantic circulation of representations, positive and pejorative, of the Emperor and the territory he ruled. In tracking the movement of objects and images designed to defend Haitian sovereignty across the Atlantic and between different media and contexts of display, Salt challenges scholars to attend to the ‘competing logics’ inserted into knowledge circuits otherwise assumed to serve the interests of the more politically powerful.

The ways in which the dynamics of circulation could subtly destabilize assumptions about the provenance of authoritative knowledge are also apparent in Sarah Hunter’s chapter on the missionary medicine of doctors and nurses associated with the Dublin University Mission based in Hazaribagh, western

Bengal during the late nineteenth and early twentieth century. Hunter is quite clear that commonplace assumptions about the superiority of 'western' knowledge were operating with full force in the rhetoric and practices of the University Mission. On this basis, the founding of hospitals and training centres in Hazaribagh and the surrounding district might be regarded as, *prima facie*, a standard case of the diffusion of 'western' medical knowledge to a colonial setting. What Hunter discerns, however, is that as medical knowledge achieved wider circulation, particularly among Indian medical practitioners, certain transformations occurred that cannot be understood in diffusionist terms. Hunter cautiously suggests that a more 'organically global' medical knowledge may have emerged that was not simply the result of the transfer of expertise from Dublin to Chota Nagpur.

In the cases of Faustin Soulouque and the Dublin University Mission the circulation of knowledge might also be productively understood in terms of translation both in a literal and more expansive sense. Faustin I couched his claims to sovereign rule in the 'display language' of world fairs or other exhibitionary complexes even while contesting how that language operated within largely European or North American cultural contexts. The translation of 'missionary medicine' into programmes and practices deemed more suitable for the culture and conditions that obtained in North East India involved a far-from smooth or unidirectional process of transformation. In the final chapter, Louise Henderson investigates such complexities further by taking textual translation as a central focus. By examining the production of German and French editions of David Livingstone's massively popular *Missionary Travels*, Henderson underlines the importance of emerging regulatory frameworks based on international copyright laws for understanding the intense contestations over textual authenticity occasioned by widening the circulation of texts through linguistic translation. The figure of Livingstone had a potential market that extended well beyond the Anglophone world but Henderson remains sceptical about talk of a 'global Livingstone' given the multiplication of meanings attached to his life through the contingent processes of translation, abridgement and piracy.

Taken together, the book's chapters open up some of the analytical possibilities latent in the category of global knowledge and, in more basic terms, operate across and between very different sorts of epistemic and cultural spaces at a global scale. At the same time, the arguments made present some significant challenges to how or whether knowledge can be thought about in global terms, not least because of the general historiographical lean towards the specificities and politics of the creation, circulation and contestation of knowledge claims within a set historical period. Global knowledge turns out to be a category that can be good to think with and against, but which should also provoke a certain sceptical distance from any easy evocations of globality.

