Chapter 3
Webs of Science, Webs of Commerce: The Life-Worlds of a Merchant Naturalist

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In 1899, the Belfast merchant and naturalist Thomas Workman (1843–1900) took as the subject of his Presidential address to the Belfast Natural History and Philosophical Society ‘incentives for the study of natural history’. In his opening remarks he noted that despite the ‘tremendous development’ represented by Darwin’s On the Origin of Species science, like a traveller entering a spiral tunnel, appeared to have lost its way. Workman was nevertheless confident that looking back at the end of the century the onward and upward course of scientific knowledge was now evident giving grounds for optimism at the cusp of a new era. What was more, the rewards of ‘struggling on towards the light’ of scientific truth would be truly epochal.2

Drawing primarily on private journals and correspondence, this chapter examines Workman’s quest for global knowledge through a reconstruction of his own travels, physical and intellectual. Particular attention will be given to Workman’s accounts of his long-distance trips to the United States, Brazil and South East Asia and the spaces in which they were created and communicated. These trips were undertaken to promote linen and muslin goods in overseas markets and to pursue his interest in global natural history. They followed a well-established commercial circuit that was an integral part of an expanding British maritime world. The specific texture of Workman’s globetrotting emerged from his own combination of economic and scientific ambitions and helped to produce knowledge of the world marked by the exigencies of commerce and the practicalities of late-nineteenth-century long-distance travel. It was also a form of knowledge that was put to local use to secure Workman’s reputation as a respected man of commerce and of science. More specifically, Workman’s interest in the distribution of tropical spiders and his strenuous efforts to tailor his textiles to suit perceived tropical needs brought into commercial and cultural contact very

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1 I am grateful to the Deputy Keeper of Records, Public Records Office of Northern Ireland and the Belfast Natural History and Philosophical Society for granting permission to use the archival material on which this chapter is based.

different worlds and occasioned a series of negotiations between contrasting scientific, political and religious realities.

The account of Workman’s life offered here, profoundly shaped as it was by the inter-weaving of commerce and science through travel, connects with recent scholarship that follows, in diverse ways, a global turn. Historical geographers and cultural historians have examined the importance of mobility and migration in understanding projects of empire in the nineteenth century. The importance of maritime travel and trade in the nineteenth century has also been given increased attention, not least within the context of attempts to explore the causes and consequences of an expanding ‘British world’. At the same time, historians of science have been calling for studies that extend beyond local and national contexts and examine the movement of science across borders and over global space. This has manifested itself not just in the investigation of the movement and mutation of scientific ideas across different cultural and epistemic domains but also in work on the mobilisation of scientific texts, objects and instruments.

The primary purpose of this chapter is not, however, to construct a ‘global history’ of science and commerce. Rather, it examines how a particular and piecemeal global vision was formed, enacted and reconstituted in and through particular sorts of spaces and movements. Workman’s world-making activities, and his own ‘life-worlds’, are localised and historicised rendering them, to borrow from John Law, ‘something … broken, poorly formed, in patches [and] very small and elusive’.

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that fixed locations become stable reference points for understanding Workman’s unfolding biography. Following Latour, the local has to be ‘redistributed’ as much as the global ‘localised’. Following Latour, the local has to be ‘redistributed’ as much as the global ‘localised’.

Workman’s travels, his science and the venues in which he spoke were constructed from a mass of often-fragile connections to other spaces and actions. In recounting the ways in which Workman’s confident global vision was set within, and was threatened by, the contingencies of various connected spaces of knowledge this essay sketches the geography of a life. While following a chronological line, the chapter pauses at certain formative spaces to explore how Workman attempted to hold in focus a world on the move. The starting point is a newly-built warehouse in Bedford Street, Belfast.

Bedford Street, Belfast, September 1852

Thomas Workman was nine when the British Association for the Advancement of Science made its first visit to Belfast in early September 1852. His father, Robert, made his new warehouses on Bedford Street available to the Association for the evening soirée. The ‘Great Lower Room’ provided an excellent venue for the hundreds of members of the Association to promenade and converse. The large hall, designed to store muslin and linen textiles for export, was tastefully decorated and filled with scientific objects and instruments to instruct and entertain the guests. On the walls ‘colossal diagrams, maps and charts’ depicted the geological structure of the globe. A distribution centre for textiles produced from both local and internationally sourced fabrics and sent to trading houses in different parts of the world had been converted into a temporary museum, art gallery and space of scientific conversation about a wider world.

The day before, the Association’s President, Colonel Edward Sabine had addressed members from in front of the pulpit of May Street Presbyterian Church. The vision of science that Sabine presented was self-consciously global. The onward march of the ‘magnetic crusade’; progress towards calculating the figure of the earth through trigonometrical survey; the worldwide study of tides and temperatures – all spoke clearly of science’s growing command of global phenomena. Sabine touched too on the increasing facility with which scientific ideas moved across the globe. He singled out for praise the government of the United States for encouraging the free exchange of scientific texts across national

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11 ‘The President’s Address’, *The Belfast News-Letter*, 3 September, 1852, 1.
borders by exempting them from Customs Duty. In his vote of thanks, the astronomer Thomas Romney Robinson echoed Sabine’s support for the global spread of scientific enlightenment and called on the inhabitants of Belfast to take to ‘remote regions the power of intellect and the energy of strength’. Belfast, ‘the heart of Ireland’ and ‘the centre of Ireland’s life’, was well placed to participate in a global project of scientific education.  

This rhetoric of global knowledge, influence and transformation found echoes in the instruments and charts on display the following day in Robert Workman’s warehouses. In a more intimate way, it also resonated with Robert Workman’s own combination of scientific interests and commercial ambitions. Thomas Workman was being raised in a household surrounded by scientific conversation and supported by global trade in textiles. The family home on Windsor Avenue, South Belfast, had been given the name Ceara after Robert’s favourite Brazilian port.  

Workman’s schooling further encouraged an interest in science. He was educated at the Royal Belfast Academical Institution, a school with a celebrated reputation for cultivating a taste for natural philosophy and natural history. In 1858 he entered Queen’s College, Belfast as a non-matriculated student, allowing him to attend lectures and use the library. By 1861 he was participating in local scientific societies. In 1863 he became a founding member of the Belfast Naturalists’ Field Club. At the same time he took on increased responsibility in his father’s textile business. When Robert Workman died in 1870, T. and G.A. Workman Ltd. was passed to Thomas and his brother George. The Bedford Street warehouses remained the focal point and Thomas took over his father’s role in securing orders from merchant houses across the world. Yet even before he had full responsibility, Thomas had the opportunity to travel and learn the science and art of observing alien natural, cultural and economic environments.

Camp Supply, Indian Territory, January 1870

Just a few months before his father’s death, Thomas departed from Londonderry on the SS Nestorian to embark on a tour of Canada and the United States. Although Thomas met with some business contacts, the trip’s primary goals were
self-improvement and a search for personal adventure. It also provided an opportunity to learn how to observe a world strikingly different from the one Thomas knew in Belfast. The observational practices Workman honed in the United States, especially in the American West, were those he would later employ to fuller effect to acquire knowledge of natural history and create economic opportunities in places far distant from Belfast. In Workman’s life, as we shall see, the American West marked both the beginning and the end of his travels. His first encounters with that ‘mythic’ frontier land were formative and followed a common and well-established practice of using the American West as a space of self-culture and as a preparation for global travel.19

Workman’s largely touristic descriptions of North America were recorded in a journal written up as a series of letters to members of his family and illustrated with his own hand-drawn images and photographs either taken by him or acquired while on tour. For the first part of his journey, much of the descriptions and sketches conveyed the dramatic spectacles of waterfalls and charismatic fauna. Whatever the appeal of these vistas and natural historical novelties, Workman frequently punctuated his narrative with a promise of more exciting scenes to come. It was encounters with Native Americans that represented for Workman the climax of his travels in the United States.

Workman’s first sighting of indigenous groups came on 7 January 1870 a mile outside Camp Supply, a US army post located in ‘Indian Territory’, Oklahoma. His initial impressions, written up in his letter-book journal, were marked by disappointment and unmet expectations. With further meetings and more intimate encounters, Workman added more positive portraits of Native Americans. Throughout, his descriptions oscillated between bestialising Native Americans and romanticising their character and lifestyle. On the one hand they were ‘like gipsies’ living in dirt and squalor. The ‘Indian children resemble[d] barrel monkeys in every respect except the tail’.20 On the other hand, their ‘vices’ were apparently derivative, an effect of contact with Europeans. Their worst fault, Workman concluded was, ‘that they are inveterate beggars’. But it was an acquired rather innate habit that only emerged after prolonged residence among European settlers. A romanticising impulse was reflected in Workman’s note in his journal that he ‘did not consider Fenimore Cooper’s Indians overdrawn … I have seen many quite as good as those he depicts’.21 Any sense of ambivalence or uncertainty in


Workman’s ethnographic descriptions was largely masked by the confident prose and pictorial practices of the assured roaming observer. His fleeting encounters with Native Americans may have disturbed the exhibitionary logic of Workman’s illustrated narrative but they did not dislodge it.

The largely non-reflexive mode of Workman’s narrative, in many respects typical of contemporary British attitudes and accounts of indigenous Americans, reasserted itself even in reports of circumstances where his own life was either seriously endangered by, or depended upon, the actions and decisions of non-Europeans. When he found himself involved in a US cavalry expedition to pacify ‘marauding’ Kiowa, Workman made the most of the opportunity to witness the rituals and costumes of war. Once the two parties finally met on a ‘large plain’, some twenty miles from Camp Supply, Workman, after initially being overcome with fear at the possibility of slaughter on both sides, joined the officers in meeting Kiowa chiefs in council. Then, after an agreement not to fight was eventually reached, Workman circled up to the top of hill and ‘look[ed] down at the extensive plain traversed by the white coated Indians’. It was, he noted, ‘a sight that I think will be vividly photographed in my memory for the remainder of my life’. He was, with relative ease, safely behind the camera – on this occasion metaphorically – confirming his position as a detached and elevated onlooker apparently removed from the intricate and imbalanced play of power that seemed to unfold independently of his presence. The apolitical tenor of Workman’s discourse was reinforced when he sketched a subsequent meeting between the interpreter John Smith and Spotted Wolf, Chief of the Cheyenne. Observing an apparent bond between the two men, Workman remarked, ‘so you see, there can be true friendship between whites and Indians’ (see Figure 3.1).

As well as providing his family with a full account of his adventures, Workman’s tour of the United States, which subsequently took in New Orleans, Washington DC and New York, supplied material for talks to Belfast’s learned societies. On his return home Workman delivered a lecture to the Belfast Naturalists’ Field Club entitled ‘a month on the Prairies’. The centrepiece was an account of the standoff between the US Cavalry and the Kiowa, ‘in all their savage magnificence of war plume and paint’. In lecture form, Workman’s observations were presented as a form of ‘global’ knowledge – that is, knowledge readily detached from the particular circumstances in which it was first acquired and reproduced for a Belfast audience. As such, Workman’s lecture did not foreground the stubborn incongruities of intercultural contact or the labour involved in producing representations in text and image of the mid-West.

At the same time, of course, Workman’s confident posture, which seems to confirm a Victorian stereotype, was a fragile achievement. The use of photographs and sketches, along with textual description, may have in James Ryan’s words, ‘produced a sense of an expanding and all-encompassing global vision’, but Workman was also implicated in the overwhelming multiplication of views that, to continue Ryan’s argument, ‘not only collected portions of the geography of the world, [but also] ensured its endless proliferation’. Further, if Workman regarded his letter-book as a composite memory device which, as he put it, ‘vividly photographed’ scenes that he had fleetingly encountered, he was, in Elizabeth Edwards’ terms, borrowing a precarious ‘mode of reassurance

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Figure 3.1  Thomas Workman, Watercolour Sketch showing meeting between John Smith, Interpreter and ‘Spotted Wolf, Cheyenne Chief’, 17 January 1870

*Source:* Illustrated Notebook, between f.110/111, PRONI, D2778/1/1A Acc 9353. I would like to acknowledge the Deputy Keeper of the Records, PRONI, for granting permission to publish.
against the instabilities, messiness and unknowability of the colonial endeavour and experience.27

The pattern of commercial and scientific travel, recorded in journals illustrated with sketches and photographs was one that Workman adopted for the rest of his life. His travels to Brazil in 1880–1881 and to South East Asia in 1883, 1888, 1890 and 1892 provided abundant opportunities for commercial expansion, scientific fieldwork and journal writing. After his first three trips to the tropics, Workman sifted through his material, selecting what he thought would best serve a lecture for local scientific societies, most usually the Belfast Natural History and Philosophical Society.28 His growing interest in photography meant that the camera became relatively more important as a recording device and his changing interests in natural history also altered his observant practices.29 What provided stability and continuity was a confidence that the world could be described and understood using the same basic techniques of looking and interpreting. Running in parallel was a conviction that universal commerce was possible despite the highly variant conditions, cultures and social contexts that his global travels had to negotiate.

Between Sea and Shore: Brazil, January to March 1881

When Workman addressed the Belfast Natural History and Philosophical Society in 1899, he contrasted the spiralling upward progress of observers using the locomotive power of science to the ‘creatures of circumstance’ who, like Tennyson’s mariners in his poem the Lotus Eaters, can find no peace ‘in ever climbing up the climbing wave’.30 It was an apt analogy for someone familiar with the sense of disorientation produced at sea. As a yachting enthusiast, Workman knew well the thrill and terror of battling against heavy weather, of being tossed about by a churning sea. His experience of the steamship lines that crisscrossed the globe also underlined epistemic as well as existential instabilities. His own life described an attempt to overcome such disorientation and move in the direction

30 Workman, ‘Study of Natural History’, 18–19.
of truth. Nearly two decades earlier, his first trip to the tropics had provided an opportunity to see beyond the climbing wave.

On 15 January 1881 Workman embarked from Liverpool on the Red Cross Line Steamer *Paraense* bound for Pará, Brazil. This was Workman’s first trip to the tropics and it presented exciting commercial and scientific opportunities. He was also consciously following not only his father’s footsteps but also those of the naturalist, Alfred Russel Wallace. A month earlier, Workman – who had turned to a specialist study of spiders three years earlier on the advice of the arachnologist Octavius Pickard-Cambridge – had written to the celebrated naturalist asking for advice on the best means of collecting spiders in Pará.31 In his reply, Wallace advised Workman to concentrate on gardens and waste grounds rather than virgin forest and noted that local white rum, Cachaça, was cheap and abundant enough to be used to preserve spiders in bottles. Giving ‘negro and Indian boys’ 1/2d would also pay dividends, as they ‘will bring you any quantity of strange spiders’.32 Wallace’s advice was based on the understanding that Workman would spend only ten days in Pará before travelling on to other Brazilian ports. Even then, it proved impracticable as Workman moved rapidly from one stop off to another.

Being at sea proved to be as significant to Workman as making contact with merchant houses and exploring local flora and fauna. During the several stages of the voyage, Workman negotiated the unsettling effects of occupying a mobile and heterotopic space.33 This was evident, for example, in his encounters with Roman Catholic passengers. In the confined space of the ship’s cabin or smoking room, these conversations took on a particular significance. As a devout Presbyterian, Workman was particularly intrigued by the ‘exotic’ beliefs subscribed to by dedicated Roman Catholics. On one occasion, as the SS *Paraense* sailed away from Tenerife into the mid-Atlantic, Workman found himself discussing the ‘confessional, absolution and papal infallibility’ with a ‘heterodox’ Roman Catholic.34 A month later, Workman shared a cabin with a ‘frocked friar’. In his description Workman commented that this ‘strange bedfellow … was not dressed in the dirty slovenly way in which you see European friars but in a long brown and purple coat made of the best cloth’. In broken Portuguese, Workman explained that he was ‘a Zwinglian Calvinist’ but observed that the friar seemed to ‘confound all the 3 sects Calvinist, Zwinglian and Lutherans’. Defeated, Workman


32 Alfred Russel Wallace to Thomas Workman, 17 December 1880, D2778/5/G/1/6, PRONI.


34 Thomas Workman, Copy Letter Book vol. 1, 36–7, D2778/1/4, PRONI.
wished for ‘some language in which we could communicate as I would like to know what he thinks of us’. His strong sense of religious identity generated a curiosity about other forms of Christian belief only partly sated by tantalising shipboard conversations and encounters. Brief and broken though they were, these conversations playfully worked through tensions and differences that, in the context of Belfast, carried a much stronger political charge.

Arguably, however, it was the movement between ship and shore that exercised the most profound influence on Workman’s impressions of the tropical world. His first sighting of the tropics came when the SS Paraense steamed up the mouth of the Amazon River. In his journal, Workman recorded that ‘today my mental barometer has gone up two or three inches. For some time back I have been thinking that travelling was a nuisance and the Tropics a delusion but the excitement of … coming up the river has greatly cheered me up’. Employing a standard trope borrowed from a long-established ‘cult of the tropical picturesque’, he recorded how the scene also overwhelmed him. He was ‘quite unable to realize the fact that I am in the mighty Amazonas River that I have so often read of and wished to see’. On awaking the next morning he wrote that ‘I can hardly tell what I have seen it has been such a maze’. Once back at sea after his stay in Pará, Workman lapsed into a more melancholic mood and was infected by homesickness. Writing to his wife ‘Meg’, Workman wondered whether ‘you are as anxious to see me as I am to get home to you’. The fatigue produced by ‘too much novelty and hard work’ was taking its toll and Workman determined that he would not embark on a long journey again without his spouse.

The remaining accounts of his travels to Brazil are thick with descriptions of the shoreline made while on board one of the coastal steamers that served the country’s port cities. His journal entries oscillate between sketches of familiar and strange maritime scenes, mediated by comparisons with similar seascapes nearer to home. In this, Workman was operating within what Derek Gregory and James Duncan have described as the ‘complex dialectic between the recognition

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and recuperation of difference’ characteristic of travel writing as a genre.\textsuperscript{42} When exploring rock pools near to the port of Recife, Workman pointed out the similarity between the coral and seaweeds and British varieties. At the same time, his journal records the ‘brilliancy’ and ‘richness of colouring’ of tropical fish making such seaside naturalising a must ‘if anyone should come to a tropical country’.\textsuperscript{43} This movement between homely comparisons and a tropical ‘excess’ was also apparent in a description of the coastline south of Rio de Janeiro. It was, Workman suggested, ‘wonderfully like the west coast of Scotland’.\textsuperscript{44} In Workman’s estimation, the explanation lay in the former action of glaciers. The coastline around Santos, despite now being clothed in tropical vegetation had ‘in some long forgotten time [been] strangely different’ with glaciers streaming down the hills.\textsuperscript{44} It was a worldwide process of glaciation, as then understood, that bridged the temperate/tropical divide. A combination of what James Duncan has called the ‘shock of the familiar’ and an account of a planetary-wide natural process helped Workman manage the unsettling effects of tropical difference.\textsuperscript{45}

However effective such stabilising strategies proved to be, the liminal space between ocean and land also provided some of Workman’s most unnerving personal experiences. When Workman arrived off Fortaleza, the main port city of the province of Ceará, he discovered that, due to the heavy surf, it was only possible to get to land by using ‘native rafts’ or Jangada. When Workman later narrated his experience, he commented that he had ‘tried to follow [Captain Kaas] from the platform and would have done so all right but for the wretched niggers who made a wish to carry me ashore’.\textsuperscript{46} Falling into the surf, he blamed the helpers and exposed a strongly racialist attitude more often articulated in his journals using the conventional vocabulary of comparative racial description. When he returned to the coastal steamer to travel further down the coast he made sure to avoid being carried and managed to ‘get on the Jangada without help and without accident’.\textsuperscript{47} The sense of threat to personal integrity occasioned by the material and cultural liminality of the surf zone had passed and Workman was able to regain the self-control associated with the objective observer. It was a return to a sense of a stable self with its felt capacity to keep in view a unified world. That this episode occurred on first arrival off the coast of Ceará, the name of Workman’s family home on Windsor Avenue, underlines its power and poignancy.

When Workman did spend time on land, his primary task was commercial. As a result, he was limited not only by the set timetables of steamship lines but also by

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\item[42] Derek Gregory and James S. Duncan, eds, \textit{Writes of Passage: Reading Travel Writing} (London: Routledge, 1999), 5.
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the rhythms of business transactions. These dealings were recorded in a separate journal, written as a series of letters to his brother. Workman was careful to note the merchant houses that expressed most interest in the samples that he brought from Bedford Street. The ultimate goal was to secure significant orders and open up new markets in Brazil for his firm. This required sensitivity to local economic conditions and business practices in a way that echoed the attention to detail that marked Workman’s descriptions of his fleeting encounters with tropical nature. It was vital to quickly work out what type and pattern of textile would sell in the Brazilian market. Heavy linen was of little obvious use. Lighter fabrics spun from finer yarn would cost less to import due to reduced custom charges and would be more suitable for local conditions.

The importance of timely actions and precise specifications necessary to secure orders was evident in Workman’s instructions to his brother written during his stay in Brazil. In one letter to his brother, after reflecting on the fragile economic climate in Ceará following a severe drought and famine, Workman requested the making of ‘a web with our own weavers 52 inches wider with 1/8 inch split in the middle for cutting up and have it bleached when I return’. In issuing this instruction Workman was rapidly shuttling between the demands of an uncertain Brazilian market and the technicalities of textile production in Belfast.48 Science and commerce were here brought intimate contact through a technical interest in two types of web – the natural snare of a spider and the fabric specifications for his ‘own weavers’. In his scientific reporting and business speculations Workman operated with a conviction that both types of web could achieve a global distribution. Among the species of spiders that Workman managed to collect in Brazil were several that had a trans-continental distribution. Perhaps his most treasured find in Brazil was a species first collected in Java. Workman already had in his possession one that had been sent from Madagascar. The webs it created were clearly adequate for survival in Brazil, a fact that resonated with Workman’s conviction that, whatever the challenges of oceanic travel and crossing material and cultural thresholds, his own woven fabric could be successfully exported to a tropical economy.49 What remains to be explored, however, are the ways in which Workman’s strenuous efforts to collapse distance and overcome the friction of natural and cultural difference played out in his home-worlds.

Belfast Museum, College Square North, February 1889

On 5 February 1889, Thomas Workman entertained members of the Belfast Natural History and Philosophical Society with a talk on ‘A visit to Singapore’. Illustrated

48 Thomas Workman, Copy Letter Book, vol. 2, 22, D2778/1/5, PRONI.
49 Placing spider’s webs and the webs of human weavers within the same frame echoes a literary tradition that more explicitly did the same thing in mythological mode. See Katarzyna and Sergiusz Michalski, Spider (London: Reaktion Books Ltd, 2010), 60–65.
with Workman’s own ‘limelight photographic views’, the lecture presented a vivid picture of the ‘Liverpool of the East’, allowing the listeners to participate in a typically late-Victorian mode of vicarious travel.\(^{50}\) During his lecture, Workman offered a panoply of views that ranged from topographic scenes to descriptions of ‘Hindoo funeral processions’ and Chinese graveyards. Rhapsodizing about the tropical scenery (it was, Workman noted, ‘impossible to paint’), Workman decried the spoiling effects of the numerous defensive structures around Singapore – a consequence of a recent geopolitical standoff between Britain, Russia and France.\(^{51}\) These fleeting views transported the audience to the far side of the globe and reinforced Workman’s well-established reputation as a credible scientific witness of tropical flora, fauna and human culture. Workman’s efforts to transport his listeners to far-flung exotic places were echoed in the collection of ‘foreign birds’ in cases positioned around the lecture hall. Birds of Paradise from Malaysia, a ‘parson bird’ from New Zealand, penguins from the Antarctic and a Bengal Vulture were among the stuffed specimens on display.\(^{52}\)

Workman was intimately acquainted with the small lecture room at College Square North and with his audience (restricted as it was to members of the Society). He had been a Society shareholder since 1877 (by transfer from his mother) and a member of the Council since 1878.\(^{53}\) His first paper to the Society was on spiders and was delivered in January 1878. Over the next decade and more, Workman gave several accounts of his trips to Brazil and South East Asia and instructed Society members on the respiratory organs of animals, Irish spiders and island biogeography. He was also one of the Society’s most significant donors. His collection of Irish spiders, deposited in 1880, was among his more important gifts. He also regularly presented objects gathered during his travels. The annual report for 1889 records Workman’s contributions of, ‘a number of land and freshwater shells from Singapore, a flint knife from New Guinea, two quartzite knives from North Queensland, several nests of trapdoor spiders, specimens of land and freshwater shells from Madagascar and Brazil, insects and fish from North Australia, a snake from Burma and several snakes from North Australia’.\(^{54}\)

In submitting this eclectic set of objects, Workman followed a tradition of collecting that the Society had, in its earlier years, done much to foster.\(^{55}\) In terms of global reach if not quantity, Workman’s donations ranked him alongside earlier Belfast travellers such as Gordon Augustus Thomson (1799–1886) and James Emerson Tennent (1804–1869). This was one reason why Workman was elected

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\(^{50}\) ‘Belfast Natural History and Philosophical Society’, *The Belfast News-Letter*, 6 February, 1889, 7.

\(^{51}\) Thomas Workman Lecture Notes, D2778/1/5, PRONI.

\(^{52}\) Visitor’s Guide to the Belfast Museum (Belfast: BNHPS, 1880), 6.

\(^{53}\) Belfast Natural History and Philosophical Society List of Shareholders and Members, p. 65, D3263/C/6, PRONI.

\(^{54}\) *Proceedings of the BNHPS* (1889): 9.

\(^{55}\) See Jonathan Jeffrey Wright, Chapter 7, this volume.
President of the Society in 1898 and it demonstrates the importance of the Society to Workman’s self-fashioning as a civic worthy and reputable naturalist. Yet Workman’s efforts to confirm and consolidate his standing as a virtuous scientific citizen were not entirely in keeping with how associational science in civic as well as intellectual terms was assessed. By the 1880s, ‘foreign’ objects did not carry the same significance as they had in earlier years. Priorities had begun to change and this altered the value of Workman’s efforts to sustain a tradition of donation of objects gathered from the ‘four quarters of the globe’.

By the 1880s the Society’s museum was not considered adequate for a rapidly growing industrial town. Although it had been extended in 1880 to accommodate the collections of the Belfast antiquarian Edward Benn, this did not meet the requirements of those calling for a museum that was free to the public.56 Linked to this was the fact that technical education was being promoted as an urgent concern and it proved difficult for the Society to align its aims with moves to improve Belfast’s provision of more practical learning. A museum of industrial arts was considered by some as a much more urgent desideratum.57 The opening of the Free Public Library on Royal Avenue in October 1888, paid for by the adoption of the Free Libraries Act by the Town Council, further altered the standing of the Society’s Museum. While prominent members of the Society had strongly backed the adoption of the Act and had hoped, given the right conditions, to donate its collections to the new museum, this did not occur.58 In part, this was due to lack of funds. The new publicly funded library included an art gallery but there was insufficient room for the Society’s collections. Accompanying these practical challenges was resistance to rate-supported public museums among other members of the Society. For John Brown, the Society treasurer, ‘handing over’ the collections was not only, in legal terms, questionable but would also have a ‘weakening effect’ on voluntary efforts to create a successful local museum.59

Alongside such local wrangling over the relative merits of municipal control and voluntarism, changing policies of collection and display associated with provincial museums across Britain and Ireland were having an effect. The ‘foreign collections’ of a number of museums increasingly occupied a kind of

56 On the extension, see ‘Annual Meeting of the Belfast Natural History and Philosophical Society’, The Belfast News-Letter, 10 June, 1880, 6.
57 On the need for a public museum displaying industrial arts, see, for example, ‘Progress of Science and Art in Belfast’, The Belfast News-Letter, 1 January, 1880, 5; and William Nicholl, ‘Belfast Free Museum’, Northern Whig, 16 April, 1890.
59 John Brown, ‘Belfast Museum’, Northern Whig, 8 April, 1890. Brown was a significant figure in Belfast’s scientific culture. He was elected to the Royal Society in 1902.
third rank below local and ‘typical’ collections of natural history and antiquities.\(^6\)
This certainly appears to be true of the Belfast museum. As the annual report of the Belfast Society in 1881 put it, ‘the council still keep steadily in view the leading idea that a local museum should, in the first place, be illustrative of the antiquities, geology, flora and fauna of the country in which it exists’.\(^5\)
The value of foreign objects remained in terms of attracting visitors on Easter Monday when the Museum was opened to the public, or spicing up fund-raising conversazioni, but they were increasingly regarded as beyond the legitimate scope of regional museums, including those funded by private subscription. The only non-local items that retained a higher value were the proceedings of foreign learned societies sent in exchange for the Society’s own publications. Fittingly, it was the Society’s ‘zealous librarian Mr [Thomas] Workman’ who maintained those wider connections throughout the 1880s.\(^6\)
Yet for all Workman’s zeal in establishing and maintaining transnational exchange, there was a growing sense that contributors to local natural history and technical education were regarded more highly than donors of foreign material in the reputational economy of civic society in late-Victorian Belfast.

What was true of Workman’s donations was also true of his lectures on foreign travel. By the late 1880s, the Society was promoting heavily its courses of ‘popular’ lectures delivered by visiting speakers that aimed to attract non-members and educate a local public in science. This was one way to justify its existence and meet criticisms that its relevance was restricted to those who could afford the cost of membership. The small room on the first floor where Workman’s lecture on Singapore was held could only accommodate an audience of two hundred and was cramped and poorly ventilated.\(^6\)
It was no longer considered adequate for accommodating a different style of lecture and a public rather than essentially private audience.\(^6\)
While still clearly appreciated by members, Workman’s account of his ‘visit to Singapore’, and his donation of objects acquired during it, were not fully in tune with the shifting emphases shaping late-Victorian Belfast’s scientific and civic culture.

None of this suggests that Workman himself was marginalised by the Society to which he dedicated so much of his time outside of business hours.

60 On these debates, see Diarmid A. Finnegan, Natural History Societies and Civic Culture in Victorian Scotland (London: Pickering and Chatto, 2009), 76–84; cf. Kate Hill, Culture and Class in English Public Museums, 1850–1914 (Aldershot: Ashgate, 2005), 69–89. Note that Hill’s study is of English municipal or rate-supported museums only.
61 ‘Natural History and Philosophical Society Annual Meeting’, The Belfast News-Letter, 8 June, 1881, 3.
It does highlight, however, that Workman had to negotiate a range of concerns in establishing and enhancing his standing locally. It is worth noting, too, that these negotiations were made more urgent by the fact that Workman, at the time of giving his lecture on Singapore, was fighting to preserve family honour in the face of sensational divorce proceedings involving his brother and business partner, George Augustus Workman. The case had been before the probate and matrimonial court in Dublin several times during 1888 and remained unresolved until April 1889.\(^65\) With very public accusations of forged letters and cruel treatment levelled by George’s estranged wife not only at her husband but also his close relations, the case presented a serious threat to the good character of the Workman family.

The prioritisation and valorisation of a particular version of ‘the local’ by the Philosophical Society was, perhaps, one of the reasons why Workman stored and displayed most of his collections of tropical spiders (including some significant type specimens) and other foreign exotica at his home in Helen’s Bay on the southern shore of Belfast Lough.\(^66\) This domestic museum was, however, much more than a temporary storehouse for under-valued collections. As an ostensibly more private place for dealing in global knowledge, it deserves fuller attention.

**Craigdarragh House in the 1890s**

Built in 1850 on the southern shore of Belfast Lough, Craigdarragh House was the residence of several wealthy merchants before the Workman family began to rent the property in 1881.\(^67\) It was one of the several large houses built along the Lough shore and reflected, among other things, the growing wealth of Belfast industrialists. Designed by Charles Lanyon for the county Down landowner, Robert Francis Gordon, it was later purchased by the British diplomat and local worthy, Lord Dufferin, who rented it until Thomas Workman purchased the freehold in 1883.\(^68\) By then Workman’s family had grown in size (at that stage, there were three daughters and two sons) and his commercial interests were expanding. Set in an estate of some 26 acres, Craigdarragh House underlined Workman’s growing status as a member of Belfast’s business élite.

Like Victorian homes in general, Craigdarragh House was composed of ‘a number of spaces intended for diverse purposes that [did] not fit neatly into the

\(^{65}\) For sample reports, see ‘Dublin Law Reports’, *The Belfast News-Letter*, 13 March, 1888, 8; and ‘A Belfast Divorce Suit’, *Freeman’s Journal*, 29 April 1889, 6.

\(^{66}\) The vast bulk of Workman’s collection of tropical spiders, which included a number of type specimens, were deposited with the natural history department of the Dublin Science and Art Museum after his death.

\(^{67}\) Workman is recorded as residing at Craigdarragh from that year. For example, ‘Births, Marriages and Deaths’, *The Belfast News-Letter*, 22 November, 1881, 1.

single category of the private’.  

A key illustration of this was the fact that the house, as well as being a domestic space, functioned as a site of scientific interest. As early as 1883, Workman received members of the Belfast Naturalists’ Field Club as part of a daylong excursion. As one of the founding members of the Club, Workman was well placed to play host and to talk the members through the ‘many objects of interest’ held at Craigdarragh not least the large collection of arachnids from Brazil, Java and Madagascar. As the report of the excursion noted, Workman also guided the excursionists down the glen that ran to the shore, a part of the grounds that had ‘a tropical aspect’ set off by the luxuriant ferns and ‘festoons of ivy’. 

The house and its grounds provided an opportunity to investigate local flora and fauna and glimpse the natural history of the tropics in a way that echoed other more public spaces explicitly designed to accomplish the same effect.

In the time-honoured fashion of the Victorian naturalist, Workman’s home also became the centre of an extensive network of scientific correspondence in ways that transgressed a clear demarcation between private and public. Corresponding with experts was vital if Workman was to establish himself as an authority and make his mark on the developing discipline of arachnology. The hundreds of letters sent to Workman during that decade from arachnologists based in Europe, North America and New Zealand testify to Workman’s emerging reputation as a specialist in tropical spiders. In concentrating his efforts on Malaysia, Workman had also chosen a region that, in terms of its arachnids, had not been explored before except by the Hungarian entomologist, Carl Ludwig Doleschall. 

This provided opportunities to find species new to science and to collect spiders that would fetch a high price in the marketplace of transnational intellectual exchange.

If Workman’s scientific correspondence was an integral part of his efforts to participate in the wider public world of science, the domestic and familial setting where this was coordinated did significantly intrude. During the 1890s, Workman increasingly relied on the help of his daughters to manage his collection, including such mundane tasks as re-filling specimen bottles with ‘spirits of wine’. One daughter, Margaret, provided more significant assistance using her artistic talents to provide detailed sketches of Malaysian spiders for Workman’s book on that

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73 Many of these are to be found in Thomas Workman Letter Book, E MSS WOR A1:1, Library and Archives, London Natural History Museum.

subject. In a letter to Workman, Reginald Pocock, the British Museum’s expert on arachnids, praised Margaret’s figures and recipients of the first volume of Workman’s *Malaysian Spiders* frequently singled out the ‘extraordinarily good’ illustrations. Margaret’s drawings also facilitated Workman’s collaboration with the Swedish arachnologist Tamerlan Thorell who, on account of her precise depictions of tropical spiders, counted her a ‘colleague’ and sent her copies of his scientific papers. In these ways, Margaret’s sketches made in the drawing room of Craigdarragh House helped to consolidate Workman’s scientific networks and reputation.

Beyond such scientific endeavour, Craigdarragh functioned in other ways as a space in which the global was domesticated and the domestic entrained in global flows. Workman’s financial investments, for example, were strongly mediated by familial relations. In addition to his linen and muslin business, Workman helped to manage a large Belfast-based shipbuilding firm – Workman, Clark and Co. Ltd – established by his brother Frank in 1880. By the 1890s, Thomas was Director of the firm and the largest shareholder. He also held shares in the Rangoon-based rice-trading firm, the Arracan Company Limited. William Hill, Workman’s brother-in-law, was the Company’s agent in Burma.

Needless to say, Workman’s efforts to maintain Craigdarragh as a hub for scientific exchange and as a place to manage the challenges of a ‘global’ economy occurred alongside activities that had a distinctly local horizon. The house, for example, was used to host a Sunday School run by Workman and his family before the erection of a new Presbyterian Church in the vicinity. Workman used his influence and his respected position within the Presbyterian Church to lobby for a new church building in Helen’s Bay and subsequently helped to finance the costs of erecting it. He was involved in political concerns, not least with mass agitation over Home Rule. In the period leading up to his final trip to Singapore in 1892, a local committee nominated Workman as a delegate to the Ulster Unionist Convention held in Belfast in June of that year. And he invested his capital in local property speculations. With his several brothers, Workman owned two

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76 Tamerlan Thorell to Workman, Montpellier, 29 March 1893, Workman Letter Book, 23.
77 ‘Death of Mr Thomas Workman, J.P., of Belfast’, *Northern Whig*, 14 May, 1890.
78 See, for example, William Hill to Thomas Workman, Rangoon, 23 October 1885, Business Correspondence to Thomas Workman, D2778/5/A/3/8, PRONI.
79 ‘Death of Mr Thomas Workman’, *Northern Whig*, 14 May, 1890.
estates in the districts of Windsor (in Belfast) and Marlborough (then just outside the city boundary).  

At the same time, none of these activities were entirely cut off from the wider worlds associated with Workman’s various commercial and scientific pursuits. Even the mundane matter of managing the grounds around Craigdarragh House intersected with Workman’s expertise in tropical spiders. In 1896, on completion of his first volume on Malaysian arachnids, Workman sent a complimentary copy to his neighbour, Lord Dufferin. The reply was warm and admiring: ‘I am really very grateful to you and proud that I have such a learned neighbour’.  

This cordial exchange occurred not long after Dufferin and Workman faced each other in court over a ‘right of way’ dispute and this gift may have signalled, and enacted, an end to hostilities.  

Workman’s life at Craigdarragh threaded together scientific collecting, commercial enterprise and local endeavour in what might be described as a ‘buffered’ but ‘porous’ domestic space. Perhaps more than any other activity, creating a collection of tropical spiders underlined the unstable character Workman’s attempts to be at home in a wider world. Immersed in ‘spirits of wine’ and placed in flattened phials by his daughters, the tropical spiders in Craigdarragh House could be safely studied and admired without risk or sense of danger. At the same time, the tropical spiders carried darker meanings that evoked some of the uncertainties and risks associated with trade and travel in the tropics. The more threatening qualities of tropical spiders sat uneasily alongside domestic as well as intellectual ideals and pointed to the limits and fragility of efforts to domesticate ‘global’ realities.

The Death of a Merchant-Naturalist, May 1900

In 1900, a few days before Easter, Thomas Workman embarked on a long overdue return visit to the United States. As usual, his purpose was twofold. He had business matters to attend to but he also saw the trip as an opportunity to expand his knowledge, and his collection, of the world’s spiders. This trip, however was

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82 See Windsor Building Company Ltd and Marlborough Park Company, D2778/13, PRONI.
84 On the court case, see Belfast News-Letter, 2 August, 1895, 7.
85 I have borrowed these terms from Charles Taylor, A Secular Age (Cambridge, MA: Harvard University Press, 2007).
86 On the rise of the association between tropical spiders and Gothic horror in precisely this period, see Claire Charlotte McKechnie, ‘Spiders, Horror and Animal Others in Late-Victorian Empire Fiction’, Journal of Victorian Culture 17(4) (2012): 505–16.
87 ‘Death of Mr Thomas Workman’, Northern Whig, 14 May, 1900.
tragically cut short. Part way through his tour, at St Paul Minnesota, Workman suddenly took ill and, shortly afterwards, died from ‘affection of the heart’. In lamenting the loss, John Brown, the incoming President of the Belfast Natural History and Philosophical Society and one of Workman’s ‘earliest Belfast friends’ offered a ‘tribute of esteem’. Workman, he declared, ‘was one of the few business men in our city who found time for original scientific research’. His death was to be deplored, marking as it did the end of rare efforts to use ‘far business connexions’ to master a branch of natural history.

Arguably, Workman’s death marked more than the passing of a local civic worthy. It also signalled the steady decline of a mode of being. By 1900, the cultural logics that supported the combination of business, science and travel embodied by Workman were waning. The professionalisation and specialisation of science, operating as it did with new definitions of certified expertise, was working against assigning a significant role to amateur investigators. In business circles, science had increasingly become a form of ‘shop talk’ rather than a mark of respectability or a binding agent for strengthening commercial relationships. Further reinforcing this disintegration was the steady retreat of the voluntarism that had been the lifeblood of the kind of associational culture so crucial to Workman’s public reputation.

The geography of Workman’s life that has been sketched here, then, was a geography of its time. Even so, it prompts more general reflection. Workman’s life can be said to demonstrate how global ambitions – or a desire to capture global patterns and a fully comprehensive view of things – form within, and are frustrated by, overlapping and often incommensurable spheres of action. In Workman’s case, it is also clear that a search for global knowledge can operate in ways that smooth out the uneven and intricate textures of local realities even while they seek to capture them in a piece of text, a collection of spiders or a set of images. Certainly, his attempts to freeze-frame the fluid complexities of inter-cultural contact in the American mid-West tended to retreat to the safety of stereotyped views which were at best a simulacrum of ‘global’ or comprehensive knowledge. The maritime and littoral spaces he traversed in 1881 were represented in situ and back in Belfast in ways that eased the more turbulent realities of commercial and scientific travel in the tropics. Perhaps unexpectedly, holding the world steady in these ways did not guarantee Workman’s success within Belfast’s associational culture. In that context, he had to struggle to make knowledge of distant places resonate with local priorities. Finally, all of Workman’s efforts to manage the spaces that were

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91 For this trend see, for example, Anne B. Rodrick, Self-Help and Civic Culture: Citizenship in Victorian Birmingham (Aldershot: Ashgate, 2004).
central to his life and ambitions were strongly coloured by the composite domestic setting of Craigdarragh House. In that context, the familial and domestic basis of his commercial and scientific initiatives was more evidently on display.

When Workman delivered his final address to the Belfast Natural History and Philosophical Society in 1899, he offered the search for ‘similarity in structure existing between animals from separate parts of the globe’ as a primary incentive for studying natural history. It was also imperative to determine whether these similarities were the product of connections in the geological past. It was, Workman noted, spiders preserved in amber that provided the best evidence for achieving this goal. One spider, *Eriauchenius workmani* – with its elevated head or caput – provided a case in point. Until it was described and named after Workman by O.P. Cambridge in 1881, its unusual anatomy was only known in extinct species preserved in amber found on the shores of the Baltic Sea.92 Such fossil spiders in amber or extant spiders in spirits were tiny fragments of de-contextualised knowledge similar to Workman’s letter-books and lectures offering glimpses of encounters with distant places. If such knowledge might in one sense be termed global, it was also profoundly patchy and scattered. As such, it reflected the delicate and half-formed webs of science and commerce that were spun within and between the diffuse and intimate spaces that made up the geography of Workman’s life.

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