Introduction

The term 'revival' has become synonymous with nineteenth-century stained glass. A combination of the social, religious, technological, artistic, and industrial conditions of this era created an environment in which the art of stained glass flourished, in Britain and beyond. At the beginning of the century there was little demand for stained glass windows and few trained artists working in the medium, but by 1851, the year of the Great Exhibition, the industry was reinvigorated, and fast expanding beyond Europe to countries without a medieval tradition of stained glass manufacture in North America and Australasia. Nineteenth-century imperialism provided a further vehicle for the expansion of the stained glass industry, distributing windows far beyond these continents to Asia, Africa, and South America.[1] Yet in spite of the widespread presence and growing appeal of stained glass across the globe in this period, the vast majority of scholarship on nineteenth-century stained glass remains confined within national boundaries.

This book broadens such approaches by taking an international and interdisciplinary approach to the study of nineteenth-century stained glass in the cosmopolitan contexts of the international exhibitions, *expositions universelles*, *Weltausstellungen*, or world's fairs, as they are also known. At these vast ephemeral events, international displays of stained glass formed part of the numerous artistic and industrial commodities exhibited on a grand scale to the public, outside of traditional ecclesiastical settings and contexts, and in a predominantly secular environment. Since the transformation of stained glass in the nineteenth century coincided with the development of international exhibitions, these events provide an opportunity to explore the growing significance of stained glass in this era, its expansive production, changing status, and varied use, within a unique set of cultural parameters and social environments.

The stained glass 'revival'

After the destruction of much medieval glazing and the prohibition of religious images during the Protestant Reformation of the sixteenth and seventeenth centuries, the manufacture of stained glass in Britain quickly waned. Although a few practitioners continued the production of stained glass in the seventeenth century, the outbreak of the English Civil War in 1642 halted developments and brought further desecration to religious buildings, many of which contained stained glass. It wasn't until the late eighteenth century that the medium began to be significantly revived, aided by the Romantic Movement and the renewed enjoyment of ancient ruins and artefacts. As Rosemary Sweet has noted, antiquaries started to appreciate the beauty of stained glass for its ambient qualities, and as an archaeological artefact:

> By the end of the century … a taste for painted glass for its aesthetic qualities – the air of gloom and mystery with which it endowed a church interior – as well as the craftsmanship involved in its decoration, ensured that it was becoming much more highly prized amongst antiquaries.[2]

During the nineteenth century, the stained glass industry expanded at an unprecedented rate.[3] Economic circumstances favoured a revival and led to several technological developments in glass manufacture.[4] In 1826, Georges Bontemps (1801–82), owner of a glassworks at Choisy-le-Roi, near Paris, successfully reproduced flashed ruby glass after a medieval recipe.[5] The manufacture of cylinder-blown sheet (or plate) glass, first introduced to Britain in 1832 by Chance Brothers Ltd at Smethwick, West Midlands, expanded the utility of glass as a construction material, and brought British glass production in line with continental methods.[6] The repeal of glass tax in 1845 made glass more affordable, whilst the abolition of window tax in 1851 increased demand for domestic window glass.[7] The Crystal Palace, a cast-iron and plate-glass construction erected in London for the Great Exhibition of 1851, was itself a product of these industrial and economic changes, exemplary of modern engineering and glass architecture.[8]

Arguably, the most influential factor in the increased interest and demand for stained glass around this time was the revived taste for 'gothic' architecture. In Britain, the publications of architect Augustus Welby Northmore Pugin (1812–52), *Contrasts* (1836) and *True principles* (1841), advocated a 'pointed' or 'gothic' style. Gothic architecture was further promoted as the most appropriate style for ecclesiastical buildings by groups such as the Oxford Tractarians, who sought to reconcile the Church of England's thirty-nine articles of faith with the doctrines of the Catholic Church through a series of publications entitled *Tracts for the times* (1833–41). The publications of the Cambridge Camden Society, founded in 1839 (and known as the Ecclesiological Society from 1845), also encouraged architectural and liturgical reform within the Anglican Church based on

the religious splendour of the Middle Ages.[9] During this period hundreds of churches were built and restored across Britain, many of which were fitted with stained glass windows.[10]

Interest in medieval art and culture provided both the impetus and traction for the revival of stained glass in the first half of the nineteenth century, across Britain and Europe. The restoration of medieval monuments enabled stylistic and scientific analysis of surviving medieval glass, and increased both glass-painters' and glaziers' understanding of medieval iconography and glazing techniques.[11] Renewed appreciation of medieval stained glass, and the skilled craftsmanship involved in its production, led to several historical studies and practical experiments to improve modern glass. The investigations into the chemical composition of medieval glass instigated by barrister and stained glass historian Charles Winston (1814–64), but carried out by a chemist identified only as 'Dr Medlock' in collaboration with Edward Green (dates unknown) of James Powell & Sons, helped glassworks such as Powell & Sons of Whitefriars, London (glassworks established 1720, purchased by James Powell in 1834) and James Hartley & Co. of Sunderland (established 1836) to produce better-quality sheets of coloured glass. Winston's resultant publication, *An inquiry into the difference of style observable in ancient glass-paintings* (1847), marked a turning point in modern understanding of the composition and evolving style of medieval glass.

Several contemporary stained glass artists penned treatises on stained glass, in order to further promote and raise the status of their art. *A Treatise on Painted Glass* (1845) by Edinburgh-based artist James Ballantine (1807/ 8–77) demonstrated the suitability of ornamental and decorative stained glass for various architectural styles. A few years later William Warrington (1796–1869) published *The history of stained glass from the earliest period of the art to the present time* (1848), illustrated entirely by chromolithographs of his own designs in the medieval style rather than genuine historical examples, an act for which he was rebuked in a review published in *The Ecclesiologist*, journal of the Cambridge Camden Society.[12] In 1855, shortly after setting up his own stained glass studio, established painter and stained glass designer Francis Wilson Oliphant (1818–59) produced a pamphlet entitled *A plea for painted glass* (1855), which sought to demonstrate the capabilities of this art form.[13]

On the continent, the French Revolutionary (1792–1802) and Napoleonic Wars (1803–15) had also brought about the destruction or removal of much historical stained glass. However, in the first part of the nineteenth century royal glass-painting manufactories were set up in 1827 at Sèvres, France,[14] and Munich, kingdom of Bavaria,[15] and these were very influential in reviving the art of stained glass and raising its profile across Europe. Following the establishment of the Commission des monuments historiques in 1837, the restoration of medieval monuments

in France under King Louis-Philippe (r.1830–48) saw the repair of many important glazing schemes.[16] In 1843 Theophilus' medieval treatise *De diversis artibus*, a quasi-practical craft manual, was translated into French by historian and bibliophile Count Charles de l'Escalopier (1811–61), enabling glaziers to rediscover medieval glazing practices. Treatises such as Bontemps' *Peinture sur verre au XIXe siècle: les secrets de cet art sont-ils retrouvés?* (1845) and *Quelques mots sur la théorie de la peinture sur verre* (1852) by Ferdinand Charles de Lasteyrie (1810–79) celebrated recent discoveries and hinted at future possibilities for stained glass. In Bavaria, King Ludwig I (r. 1825–48) actively promoted the art by commissioning a scheme of windows for the Mariahilfkirche (Church of Our Lady of Help), in Au, Munich, executed 1834–43. Folio publications made these windows available to a wide audience, and in 1845 Bontemps declared: 'no other windows in our time have been so well executed by more skilful hands'.[17] A few decades later, in Belgium, Edmond Lévy's *Historie de la peinture sur verre en Europe et particulièrement en Belgique* (1860) drew attention to historical stained glass in Belgium, with the aid of colour plates by leading nineteenth-century Belgian glass-painter Jean-Baptiste Capronnier (1814–91).

The rapid expansion of the stained glass industry across Europe in the mid-nineteenth century, accelerated by the gothic revival, has led to the characterisation and dismissal of much nineteenth-century stained glass as 'industrialised' and 'mass-produced'. In twentieth-century Britain such criticisms were particularly rife.[18] As Anglican clergyman Christopher Woodforde (1907–62) noted in 1954, 'it is customary to call all nineteenth-century stained glass "Victorian" and to dismiss it as unworthy of serious consideration'.[19] In 1974, English architectural historian Alec Clifton-Taylor (1907–85) advocated the removal of 'bad Victorian glass', on the principle that 'the general standard of these windows is frankly appalling'.[20] Interestingly, the same year saw the publication of Charles Sewter's major work *The stained glass of William Morris and his circle* in two volumes (1974), which hailed the work of Morris & Co. as the finest productions of the period. It was only after the publication of Martin Harrison's *Victorian stained glass* (1980) that the large quantity of stained glass windows produced by a number of artists in Britain during this era began to be properly reappraised. This reassessment was paralleled in France in the 1980s, when nineteenth-century French stained glass also began to be re-examined.[21] Since then, several biographies and gazetteers published on both sides of the Channel have contributed to our knowledge of artists and studios through chronological and geographical surveys.[22]

Since the productions of the eighteenth and nineteenth centuries fall outside the official remit of the international Corpus Vitrearum Medii Aevi (CVMA) committees, post-medieval stained glass has not received the same level of academic attention or detailed cataloguing as its medieval

counterparts. However, several national and regional catalogues of nine-teenth-century stained glass have been published across Western Europe. An exhibition catalogue published to coincide with a 1993–94 exhibition in Erfurt, along with Elgin Vaasen's *Bilder auf glas* (1997) provided the first accounts of nineteenth-century stained glass in Germany,[23] and sev-eral small volumes on nineteenth-century stained glass in churches in the German Federal states have since appeared.[24] The field of nineteenth-cen-tury stained glass studies is today growing worldwide, with research doc-umenting windows beyond the European countries of Italy, Switzerland, Austria, Belgium, Spain, Portugal, and Poland,[25] to countries in North America, South America, Australasia, and parts of South-East Asia.

Recent studies in the English language have focused on the influence of a particular style or cultural movement on the development of stained glass. Jim Cheshire's *Stained glass and the Victorian Gothic revival* (2004) explored the stained glass revival in relation to ecclesiology, economics, and patronage, although case studies were limited to little-known regional studios in South-West England. In *Angels & icons: Pre-Raphaelite stained glass 1850–1870* (2012) William Waters reassessed the work of five influ-ential London-based stained glass firms – Clayton & Bell; Heaton, Butler & Bayne; Lavers, Barraud & Westlake; Powells; and Morris & Co. (all of whom exhibited stained glass at international exhibitions) – in relation to wider developments in British art, notably Pre-Raphaelitism, which flourished from 1850 to 1870. Waters' follow-up to this, *Damozels & dei-ties: Edward Burne-Jones, Henry Holiday and Pre-Raphaelite stained glass, 1870–1898* (2017) continued his stylistic reassessment into the latter part of the century.[26] *Arts & crafts stained glass* (2015) by Peter Cormack has provided the first in-depth study of the Arts and Crafts Movement, 1880–1930, focusing on several influential British and American stained glass artists, their renewed approach to materials and techniques, influence, and artistic training. These publications have furthered our understanding of nineteenth- and early-twentieth-century stained glass within wider artistic contexts, but do not grapple with the fact that, in this era, as we shall see, stained glass straddled the often-polarised spheres of art and industry. In the nineteenth century these concepts were closely linked, and nowhere was this more evident than at the international exhibitions.

The international exhibitions created new opportunities for stained glass artists and firms to showcase, advertise and disseminate designs and completed windows, and to compare their work with competitors from across the world. In turn, these displays enabled visitors to encounter the medium in new ways and different environments. As Cheshire has rec-ognised, 'stained glass had never been exhibited on this scale or in this type of situation before'.[27] The international exhibitions were beyond the Church's control, and international in scope. It is unsurprising, then, that these events became forums for the critical discussion and evaluation of

stained glass by professional and amateur art critics, fostering debates over the medium's artistic status, stylistic development, and modern application.[28] Giles Waterfield has demonstrated how the international exhibitions influenced the development of British art museums more generally.[29] Both types of venue played a key role in the public display and appreciation of art in the nineteenth century through their purpose-built buildings, collections and displays, and the evolution of both the art museum and international exhibition was closely associated with nineteenth-century ideas and ideals of municipality and governance, education, and recreation for the masses.

International exhibitions have only recently stirred the interest of stained glass historians, despite the fact that their influence on the development of stained glass was widely acknowledged in the nineteenth century.[30] For example, Charles Winston referred to various stained glass windows exhibited at the London exhibitions of 1851 and 1862 in his *Memoirs illustrative of the art of glass-painting* (1865).[31] French painter and glassmaker Léon Auguste (known as Louis) Ottin (b. 1836) drew attention to the important roles that the 1878 and 1889 exhibitions played in the rapid development of French stained glass in *Le vitrail* (1896). In his history of *Glass-making in England* (1923), Harry J. Powell (1853–1922) included a list of stained- and painted-glass exhibits contributed by British glassmakers Powell & Sons to the London exhibitions of 1851 and 1862, and highlighted the significance of these events in developing the firm's international reputation.[32]

All the major publications on nineteenth-century stained glass since have mentioned the significance of the international exhibitions on the development of the medium, but none have explored these events in detail. Harrison described the Great Exhibition of 1851 as 'the major event which reflected the progress made in the early stages of the stained glass revival', and many of the windows discussed and illustrated in *Victorian stained glass* were displayed at international exhibitions in London and Paris.[33] Sarah Brown has also acknowledged that the 'transformation of stained glass production in the first half of the nineteenth century can be gauged from the Great Exhibition of 1851'.[34] Waters highlighted the importance of the London and Paris international exhibitions in attracting potential clients and showcasing developments in British stained glass.[35] Across the channel, scholars have made more definite progress in proclaiming the significance of these events for the history of stained glass, especially by acknowledging the importance of the *expositions universelles* on the development of secular glass in France.[36]

Although this is the first sustained study on stained glass in the international context of these exhibitions, publications by Jane Spillman, Charlotte Gere, and Jonathan Meyer have demonstrated the art-historical, cultural, and social value of studying other decorative arts within these

contexts.[37] Gere's study of the decorative arts in a single museum collection at the Metropolitan Museum of Art, New York, demonstrated the wealth of international exhibition exhibits in museum collections, indicating the influence of these events on the formation of museums and their collections. Spillman's study of glass exhibits at international exhibitions between 1851 and 1904 included a small section on stained glass, although only windows exhibited by two New York studios are mentioned, giving an unrepresentative account of the stained glass exhibited at these events, which predominantly came from European makers.[38]

Given that accounts of the history, iconography, and stylistic development of nineteenth-century stained glass have, to date, almost exclusively focused on studies of stained glass within national and predominantly ecclesiastical contexts, this book explores new perspectives and implications for the study of nineteenth-century stained glass in an international context.[39] I will argue that the international exhibitions helped influence the stylistic development of nineteenth-century stained glass, provided an impetus for material and technical innovations, as well as generating new iconographic and symbolic expressions, and that, in turn, the presence of stained glass changed perceptions of the exhibition environments. The historiography of nineteenth-century stained glass perpetuates a chronological trajectory of stylistic development, but such an approach tends to oversimplify a complex stylistic narrative, and does not address national and regional variations. This book seeks to demonstrate that, while such trends exist, the stained glass windows produced in this period were eclectic in style and technique, and varied in subject matter and meaning. In the nineteenth century the art of stained glass had a strong presence in multiple and diverse contexts, both religious and secular, and it was therefore seen, consumed, and interpreted by a wide range of social groups.

To take one example, inside the Assembly Chamber of the Paris Chamber of Commerce and Industry is a large, richly coloured stained glass window entitled *Le Travail, par l'Industrie et le Commerce, enrichit l'Humanité* (Work with Industry and Commerce enriches Humanity) (Plate 1).[40] Designed by Franco-Swiss decorative artist Eugène Grasset (1845–1917) and made in the Paris workshop of Félix Gaudin (1851–1930), the window celebrates the enormous advances made in technology, transportation, and communication in the nineteenth century.[41] It was commissioned to commemorate the 1900 Exposition Universelle, where it was displayed for the six-month duration of the exhibition in the temporary pavilion of the Chamber of Commerce on the Champ de Mars. A day after the exhibition closed, the window was installed in its permanent home in the new Assembly Chamber, created during the extension of the building in 1891.[42] Measuring over 5m high and 3.5m wide,[43] the round-arched window is a prodigious celebration of nineteenth-century industrial and imperial progress. These themes were especially pertinent to the city of

Paris during its staging of the 1900 Exposition Universelle, one of the largest and most well attended of international exhibitions of the nineteenth and twentieth centuries.[44]

Three large figures, representing Work, Industry and Commerce, form the main focus of the composition. Behind this group is a modern industrial landscape with cranes, steam locomotives, railway lines, barges, warehouses, and factories. 'Work', a muscular male figure with thick black hair, is depicted as a blacksmith standing at his anvil, with a hammer in his right hand. To his right is 'Industry', a standing female figure wearing a blue dress with lace trim and a lace headdress adorned with mechanical cogs. Her long shawl blows around her body as if caught by a sudden gust of wind, lending a vitality and energy to her appearance. She rests one hand on a large cog connected to a pulley mechanism, while the other presents an incandescent glass globe, representing electricity, to 'Commerce'. The female figure representing 'Commerce' is seated in a golden chair and dressed in gold, with pearls in her hair. In her right hand she holds a book and in her left, a *caduceus*, the short staff entwined by two serpents carried by Hermes (the Greek god of commerce). Several books, along with various letters, telegrams, and parcels, are piled at her feet, reminding us of the importance of communication and exchange in the world of commerce.

In the border are several smaller allegorical figures with long red hair and classical drapery, each identified by painted inscriptions and set against decorative foliate backgrounds representing natural products (grains, plants, and fruit). Six of these figures, three on either side, represent a contemporary technological development or advancement in communication or transportation. For example, in the top left-hand corner of the window, against a background of wheat sheaves (grain), olive branches, and cannabis leaves, the invention of electric lighting is illustrated by a figure holding a light bulb. This is matched on the right by a figure celebrating the invention of gas lighting, shown against a backdrop of cotton plants and medicinal herbs. Two more figures below represent developments in communication: on the left the telegraph, with coffee beans in the background; and on the right the telephone, against a backdrop of tea leaves. Below these are two more figures illustrating modern transportation networks; the railway on the left, against a background of sugar beet; and navigation on the right, shown advancing with a rudder and ship wheel, amongst cocoa pods.

The 'fruits of empire' – grains, oils, cotton, hemp and other medicinal herbs, along with tea and coffee, exotic fruits, sugar, and cocoa – are here presented decoratively, the repeating patterns both symbolic and suggestive of abundance. Grasset's design interweaves these natural products, associated with consumption, with figures representing imperial ambition and recent developments in industry, communication, and transportation

networks, which enabled trade through the migration of labour, as well as the carriage and shipping of natural exotic produce, raw materials, artworks, and manufactures all over the world. This unique window articulates powerfully the combined forces of industrialism and imperialism, and their influence on work, industry, and trade, which had brought prosperity and wealth to powerful nations like France and Britain in the nineteenth century.

Four more figures representing key characteristics of the French Empire – Force, Riches, Independence, and Prosperity – are shown seated or reclining along the bottom of the window. In the left-hand corner, the semi-naked primitive figure of 'Force' crouches amongst vines wearing a tiger-skin hat, holding a wooden club in her right hand. 'Riches' and 'Independence' sit on either side of a globe. 'Riches' is adorned with jewellery and surrounded by oranges. She reclines, holding a crown in one hand while resting the other upon a basket of gold coins. Having thrown off her shackles, 'Independence' sits up; her sceptre pointing downwards and her foot resting on a jewelled crown, with fig trees in the background. In the right-hand corner, the figure of 'Prosperity' sits amongst apple trees, with one hand holding a cornucopia, and the other on a wheel.

The globe at the bottom of the window, which is turned to emphasise Africa, may have deliberately alluded to the expansion of the French colonial empire, initially in North Africa following the invasion of Algiers in 1830, and from the 1880s extending into vast areas of Western and Central Africa, as well as the island of Madagascar (annexed in 1896) off the east coast of Southern Africa. But imperial ambition did not come without cost. Is the figure of Force, with her outward stare and startled appearance, a reminder of the bloody battles fought and won, or is she another example of Western imperial propaganda – primitive and unyielding, ready to be 'tamed'? Ambiguous, yet beguiling, this window demonstrates how the monumental art of stained glass contributed to visualisations of nineteenth-century industrial and imperial progress, marking the expansion of trade and empire. This is a theme that pervades this book.

The window also demonstrates the reimagining and remoulding of a medieval art form for modern times. In its formal elements the window follows historical conventions in stained glass. The main figurative subjects are situated centrally, with smaller figures in the borders, arranged within ornamental backgrounds. Each figure is accompanied by attributes and identified by *tituli*. Yet in its design, materials, style, and subject matter, the window was regarded as eminently modern. Having seen the window displayed on the Champ de Mars, Parisian glass-painter Léon Daumont-Tournel (dates unknown) remarked that '[l]'oeuvre est curieuse à ce titre, et aussi par son modernisme' ([t]he work is curious for its title, and also for its modernism).[45] The iconography is unique in its celebration of modern technology, and may well incorporate the first depiction of a telephone,

patented in 1876 by Alexander Graham Bell (1847–1922), in stained glass. It is fitting that such nineteenth-century inventions were represented in a window exhibited at the 1900 Exposition Universelle in Paris, which looked back on a century of progress.[46]

In his faithful execution of Grasset's detailed design,[47] Gaudin made use of new glass materials including commercially produced Cathedral glass, which was machine-rolled to produce a textured surface on one side. The clouds of billowing smoke from the tall factory chimneys, and steam from the locomotive engine, are all created from pieces of Cathedral glass, in various white, grey, yellow, orange and red tones, with very little painted surface, their form accentuated by the lead lines. This approach to form and texture became a key feature of modern stained glass in the early twentieth century, and so *Le Travail, par l'Industrie et le Commerce, enrichit l'Humanité* demonstrated how new materials as well as new iconographic subjects on the themes of industrial progress and imperial expansion transformed the art of stained glass in the nineteenth century.

International exhibitions

Over forty large-scale international exhibitions took place across the world between 1851 and 1900, and these continued well into the twentieth and twenty-first centuries, albeit in different forms and guises.[48] These events occurred alongside modern globalisation, and were shaped by nineteenth-century imperialism and industrialisation. R. D. Mandell has claimed that the international exhibitions offer 'a sort of comprehensive, though variously distorted, flash picture of world civilization at its particular epoch';[49] and Peter Hoffenberg has noted that these exhibitions were 'agents of change', as well as mirrors of a political and social order.[50] They made connections between 'national and imperial institutions, sets of ideas, social visions and cultural practices'.[51]

Drawing on empirical and archival evidence, and close analysis of selected stained glass exhibits, this book explores how exhibitors presented the art of stained glass, and how individual stained glass exhibits were interpreted by visitors and critics, at ten international exhibitions held between 1851 and 1900.[52] Given the large number of exhibitions that were held in this period, case studies have been carefully selected as both significant and representative examples.[53] The Great Exhibition of 1851 and the International Exhibition of 1862 were the two largest and best-attended exhibitions held in London in the nineteenth century. Several historians have examined these British exhibitions in relation to themes of national identity,[54] as well as empire, religion, class, labour, and gender.[55] They took place at a time when the stained glass revival was developing apace, and were significant in setting precedents for future exhibitions held in France, the USA, and the British colonies. The series of *expositions*

universelles held in Paris in the nineteenth century (1855, 1867, 1878, 1889, and 1900) were staged every eleven years, without fail, and consistently funded by the French government.[56] Considered from this perspective, the *expositions universelles* provide a measure of the changing attitudes towards stained glass in France and demonstrate how exhibitions could be used to encourage patriotism, and propel political regimes through the adoption of the exhibition as a national tradition.

This study also includes two of the largest and most successful international exhibitions held in the USA in the nineteenth century,[57] the Philadelphia Centennial of 1876 and World's Columbian Exposition held in Chicago 1893. Publications by Robert Rydell and colleagues have assessed the influence of the American-hosted exhibitions on the development of modern America.[58] Both these exhibitions commemorated key events in America's colonial history, while showcasing the vast technological and artistic advances achieved since independence (including developments in stained glass), demonstrating the rise of modern America as an economic and political power. Although exhibitions held in London, Paris, Philadelphia, and Chicago form the main case studies in this book, the two Melbourne International Exhibitions of 1880–81 and 1888–89, which were amongst the first held in Australia in a significant nineteenth-century colonial city and emerging centre of stained glass production, provide an interesting case study for examining colonial production and consumption.[59] Australian exhibitions have more recently been repositioned within exhibition scholarship;[60] studies have examined colonial representation at the international exhibitions and the role of these events on the formation of modern Australia.[61]

Any study of the international exhibitions relies upon surviving written and visual sources in order to understand these temporary events and their displays. This book takes advantage of the rich primary sources available, including *Official Catalogues* and *Jury Reports*, which were published for each exhibition, as well as articles in British periodicals such as the *Art Journal*, *The Ecclesiologist*, and *Illustrated London News*.[62] These commentaries have been supplemented (and sometimes contrasted) with additional textual and visual primary-source evidence from 'unofficial' guides; newspaper and journal reviews; and unpublished individual accounts (both real and fictional), in the French and English languages.

Just as it is impossible to grasp these exhibitions *in toto*, it is equally impossible to gain a complete overview of the stained glass windows exhibited at these events. Official catalogues generally list the names of exhibitors and the nature of their exhibits, according to a classification scheme and/or exhibiting nation. Yet these documents are rarely comprehensive. Many of the stained glass exhibits are merely described as 'Painted glass' or 'A stained glass window', making it impossible to gain a precise list of exhibited windows. However, the Appendix to the

present book provides a list of the stained glass firms and studios that exhibited stained glass at these events, under the official classification for stained glass, as documented in official catalogues or reports. It also lists any awards they received for their stained glass exhibits. Because this information has been collated from multiple sources, including catalogues, reports, and press reviews, many of which contain errors and omissions, it should be treated with some degree of caution. It does, however, provide a sense of the scale and importance of these events to stained glass makers across the world.

From the available evidence, stained glass exhibits appear to fall into three categories; firstly, windows which were designed and/or commissioned specially for exhibition buildings and pavilions. Secondly, windows that had been commissioned for other architectural settings but not yet installed, and were therefore available for exhibition. Thirdly, smaller panels made specially for exhibition or competition purposes.

Research carried out during the preparation of this book has identified and traced the intended destination and current whereabouts of numerous stained glass exhibits, many of which were subsequently installed in churches, homes, town halls, and other public and private buildings across the world, or entered museum collections.[63] The windows discussed and illustrated in this book reveal just a snapshot of the wide range of stained glass exhibited at these events, although much care has been taken to present salient and representative examples, and the critical discourse surrounding them. Nonetheless, it is clear that the enormous quantity of surviving nineteenth-century stained glass windows across the world, executed in eclectic styles and for diverse settings, deserves reassessment and reconsideration, and can bring new perspectives to studies of nineteenth-century art, architecture, and the decorative arts.

Chapter outlines

Each chapter of this book is thematic and analyses stained glass in relation to broad concepts and themes, including material taxonomies, artistic labour, museology and the history of display, international networks, artistic styles, production and consumption, religion, the politics of nationalism, and imperialism. In doing so, it challenges many of the major methodological and historiographical assumptions and paradigms relating to the study of nineteenth-century stained glass, and incorporates new art-historical approaches to the medium alongside traditional stylistic, architectural, and ecclesiological methodologies.

Chapter 1 focuses on the classification and status of stained glass, revealing the ways in which international exhibitions contributed to debates over its artistic status, display, and arrangement within the exhibition environments. It begins by examining the theoretical problems and

potentialities of displaying an architectural art such as stained glass in a temporary exhibition setting, placing it in a museological context. It also explores how official exhibition classification schemes propagated interpretations of stained glass as a manufactured product rather than a decorative art. Finally, it addresses issues of artistic education, practice, and labour in relation to nineteenth-century stained glass, interrogating the role of the artist in an age of industrialisation, arguing that, in this era, stained glass was intrinsically hybrid, a product of collaborative labour.[64]

The international exhibitions brought together a vast collection of objects from across the world that had never before been displayed together. Placed in such a collection, individual stained glass exhibits formed new contexts and connections and reached diverse audiences. Chapter 2 explores, chronologically, the ways in which stained glass was physically displayed at the international exhibitions, and charts the reaction of exhibition organisers, exhibitors, the public, and critics to some of the main official and unofficial stained glass displays at these events. It therefore provides an overview of the significance of stained glass at these events, and reveals changing attitudes towards the displays of stained glass within these new environments.

The three remaining chapters highlight the wider implications of the exhibition of stained glass upon the global stained glass industry, thinking especially about its commercialisation and stylistic development, and how, in these environments, stained glass reflected and represented pertinent cultural and political themes, including nationalism and imperialism. Chapter 3 discusses the stylistic diversity of stained glass in this period, as evident in the international exhibition displays, which demonstrate a varied and eclectic approach to historicism and modernism; two concepts which were not mutually exclusive in this era. Nineteenth-century stained glass was continually associated with and assessed in relation to historical styles, yet artists simultaneously encountered and adopted new styles, including Japonisme and Art Nouveau. Significantly, this chapter also charts the rapid secularisation of the medium and its adaptation to modern settings and contexts, as influenced by and demonstrated at these exhibition environments.

Chapter 4 seeks to ascertain whether those makers who exhibited stained glass at these events were representative of the nineteenth-century stained glass industry at large. It outlines exhibitors' roles in the bureaucratic organisation of exhibitions and their commercial incentives for participating, revealing how exhibitors responded to the demands of consumers. It demonstrates that these displays helped exhibitors gain commissions and influence abroad, and considers the ways in which these events shaped exhibitors' reputations. Finally, Chapter 5 discusses how the exhibition environment stimulated new iconographies and meanings in stained glass, thinking particularly about how the exhibits reflected, and

influenced, some of the global political themes of the nineteenth-century exhibitions: nationalism, imperialism, and human variety.

In spite of recent interest in transnational and global art histories, and recognition that exhibitions were a 'transnational phenomenon',[65] this book uses the term 'international' throughout, following its contemporaneous usage in the nineteenth century. Similarly, as a result of the international span of this book, the term 'Victorian', used by so many British historians of stained glass to describe the productions of this period, is rejected in favour of the more globally encompassing term 'nineteenth-century'. As this is the first study to look at stained glass of this period in the broad context of the international exhibitions, it is hoped that it will encourage further investigation into the cross-cultural, international, and global dissemination of stained glass into a range of secular and religious spaces and contexts in the late modern period.

Notes

1 Alex Bremner has demonstrated the influence of the gothic revival and High Anglican culture on religious architecture in the British Empire, although the role of stained glass (and other decorative arts) in such contexts is yet to be explored. See A. Bremner, *Imperial gothic: religious architecture and High Anglican culture in the British Empire c. 1840–1870* (New Haven; London: Yale University Press, 2013).

2 R. Sweet, *Antiquaries: the discovery of the past in eighteenth-century Britain* (London: Bloomsbury Academic, 2004), pp. 272–3.

3 Martin Harrison has cited census figures that reveal this rapid growth. In 1831 there were just three registered glass-painters, in 1841 there were 108 (including five women), and by 1851 this had risen to 531. M. Harrison, *Victorian stained glass* (London: Barrie and Jenkins, 1980), p. 12. Increased interest in stained glass in the second half of the nineteenth century can also be charted in the periodical press.

4 J. Cheshire, *Stained glass and the Victorian gothic revival* (Manchester: Manchester University Press, 2004), pp. 168–8.

5 I. Armstrong, *Victorian glassworlds: glass culture and the imagination 1830–1880* (Oxford: Oxford University Press, 2008), p. 278.

6 Robert Lucas Chance (1782–1865) became friends with Bontemps in 1830. Bontemps later helped recruit French and Belgian glass blowers to work in Chance's factory, and found employment himself in the factory when he fled to England during the 1848 French Revolution.

7 Between 1844 and 1865 the price of ordinary sheet glass fell from 1s. 2d. per foot to 2d. per foot. Armstrong, *Victorian glassworlds*, p. 1, n. 3.

8 P. M. Shand, 'The Crystal Palace as Structure and Precedent', *Architectural Review* 81 (1937), 65–72.

9 C. Webster and J. Elliot, *'A church as it should be': the Cambridge Camden Society and its influence* (Stamford: Shaun Tyas, 2000).

10 The Church Building Acts of 1818 and 1824 gave a total of £1,500,000 for the erection of ecclesiastical buildings. O. Chadwick, *The Victorian church: Part 1, 1829–1859* (London: SCM Press, 1966). Local philanthropy coupled with the ecclesiological movement also aided restoration and rebuilding projects at parish churches across the country.

11 On nineteenth-century restoration of medieval glazing schemes in France and Britain, see especially M. H. Caviness, 'Some Aspects of Nineteenth-Century

Stained Glass Restoration: *Membra Disjecta et Collectanea*', in P. Moore (ed.), *Crown in glory: a celebration of craftmanship-studies in stained glass* (Norwich: Jarrold & Sons, 1982), pp. 69–73; A. A. Jordan, 'Rationalizing the Narrative: Theory and Practice in the Nineteenth-Century Restoration of the Windows of the Sainte-Chapelle', *Gesta* 37:2 (1998), 192–200; É. Pillet, *Le vitrail à Paris au XIXe siècle. Entretenir, conserver, restaurer*. Corpus vitrearum France, *Études*, 9 (Rennes: Presses universitaires de Rennes, 2010).

12 'Our literary glazier proves what twelfth century glass is by depicting choice specimens from "Bromley S. Leonard, Stepney S. Peter, and Brompton Holy Trinity, designed and executed by W. Warrington, Esq.," in the year of grace 1841.' 'Chapters on Stained Glass. – No. II. Warrington and Winston', *The Ecclesiologist* 74:38 (October 1849), 81.

13 Oliphant designed for Ballantine & Allan Edinburgh, and William Wailes Newcastle, and ran his own studio, 1854–57. 'Oliphant, Francis Wilson (1818–1859)', rev. M. Williams, *Oxford dictionary of national biography* (Oxford: Oxford University Press, 2004).

14 Alexandre Brongniart (1770–1847), Director of the Sèvres Porcelain Manufactory 1800–47, began experiments with painting on glass 1801–02 but a workshop was not formally established until 1827 and remained active until 1854. K. Bezut, 'The Stained-Glass and Painting-on-Glass Workshop at Sèvres, 1827–1854', in T. Preaud and D. E. Ostergard (eds), *The Sèvres Porcelain Manufactory: Alexandre Brongniart and the triumph of art and industry, 1800–1847* (New Haven: Yale University Press, 1997), pp. 97–111.

15 The *Königliche Glasmalereianstalt* studio at Munich was founded in 1827 as a department of the Royal Porcelain Manufactory. S. Rush, 'The Königliche Glasmalereianstalt and the Reglazing of Glasgow Cathedral', in C. M. Richardson and G. Smith (eds), *Britannia, Italia, Germania: taste and travel in the nineteenth century* (Edinburgh: VARIE, 2001), pp. 91–7.

16 Notably at the cathedrals of Bourges, and St-Denis, Notre-Dame and the Ste-Chapelle, Paris. See V. C. Raguin, 'Revivals, Revivalists, and Architectural Stained Glass', *Journal of the Society of Architectural Historians* 49:3 (September 1990), 310–29.

17 G. Bontemps, *Peinture sur verre au XIXe siècle: les secrets de cet art sont-ils retrouvés? Quelques réflexions sur ce sujet adressées aux savants et aux artistes* (Paris: Imprimerie Ducessois, 1845), p. 42.

18 Chapters on nineteenth-century stained glass in chronological studies of the medium published between 1920 and 1980 tend to be slight, and vary from critical to outright damning. For example: H. Read, *English stained glass* (London; New York: G. P. Putnam's Sons, 1926).

19 C. Woodforde, *English stained and painted glass* (Oxford: Clarendon Press, 1954), p. 55.

20 A. Clifton-Taylor, *English parish churches as works of art* (London: Batsford, 1974), pp. 148, 143.

21 See, for example, the special editions devoted to nineteenth-century stained glass in *Revue de l'Art* 72 (1986); *Métiers d'Art* 20 (November 1982); and *Annales de Bretagne et des Pays de l'Ouest* 93:4 (1986).

22 Notable gazetteers for the UK and Ireland include M. Wynne, *Irish stained glass* (Dublin: Eason and Son, 1977); B. Haward, *Nineteenth century Norfolk stained glass* (Norwich: Geo Books, 1984); N. Gordon Bowe, D. Caron, and M. Wynne, *Gazetteer of Irish stained glass* (Dublin: Irish Academic Press, 1988); B. Haward, *Nineteenth century Suffolk stained glass* (Woodbridge: Boydell, 1989); M. Donnelly, *Scotland's stained glass: making the colours sing* (Edinburgh: Stationery Office, 1997); M. Crampin, *Stained glass from Welsh churches* (Talybont, Ceredigion: Y Lolfa, 2014).

23 M. Böning, *Glasmalerei des 19. Jahrhunderts in Deutschland: Katalog zur Ausstellung, Angermuseum Erfurt, 23. September 1993 bis 27. Februar 1994* (Leipzig: Edition Leipzig, 1993); E. Vaassen, *Bilder auf Glas. Glasgemälde zwischen 1780 und 1870* (Munich; Berlin: Deutscher Kunstverlag, 1997).

24 C. Aman, *Glasmalereien des 19. Jahrhunderts: Sachsen-Annhalt. Die Kirchen* (Leipzig: Edition Leipzig, 2003); A. Hörig, *Glasmalereien des 19. Jahrhunderts: Sachsen. Die Kirchen* (Leipzig: Edition Leipzig, 2004); A. Klauke and F. Martin, *Glasmalereien des 19. Jahrhunderts: Berlin Brandenburg. Die Kirchen* (Leipzig: Edition Leipzig, 2003); R. Kuhl, *Glasmalereien des 19. Jahrhunderts: Mecklenburg-Vorpommern. Die Kirchen* (Leipzig: Edition Leipzig, 2001).

25 For Poland see W. Balus, T. Szybisty; D. Czapczyńska-Kleszczyńska, P. Karaszkiewicz, and A. Zeńczak, *Korpus witraży z lat 1800–1945 w kościołach rzymskokatolickich metropolii krakowskiej i przemyskiej. Tom 1, Archidiecezja krakowska: dekanaty krakowskie* (Kraków: Corpus Vitrearum Polska, 2014). Volumes 2 and 3, also focusing on churches in Kraków, were published in 2015.

26 W. Waters and A. Carew-Cox, *Damozels & deities: Edward Burne-Jones, Henry Holiday and Pre-Raphaelite stained glass, 1870–1898* (Worcester: Seraphim Press, 2017).

27 Cheshire, *Stained glass and the Victorian gothic revival*, p. 156.

28 Patricia Mainardi and Elizabeth Holt have demonstrated the influence of the French *expositions universelles* on nineteenth-century art criticism, revealing the intersections between art, exhibition culture, and politics. P. Mainardi, *Art and politics of the Second Empire: the Universal Expositions of 1855 and 1867* (New Haven; London: Yale University Press, 1987); E. G. Holt (ed.), *The expanding world of art, 1874–1902*, vol. 1 (New Haven; London: Yale University Press, 1988).

29 G. Waterfield, *The people's galleries: art museums and exhibitions in Britain 1800–1914* (New Haven; London: Yale University Press, 2015).

30 Brongniart acknowledged the importance of the early-nineteenth-century French national industrial exhibitions on the stained glass revival. A. Brongniart, *Mémoire sur la peinture sur verre* (Paris: Imprimerie de Selligue, 1829).

31 C. Winston, *Memoirs illustrative of the art of glass-painting* (London: John Murray, 1865), pp. 22, 46, 57, 148–51, 156, 187–9.

32 H. J. Powell, *Glass-making in England* (Cambridge: Cambridge University Press, 1923), p. 161.

33 Harrison, *Victorian stained glass*, p. 23. For example, the east window at Waltham Abbey designed by Edward Burne-Jones for Powell & Sons; Morris & Co.'s early glass at Selsley, Gloucestershire; John Milner Allen's designs for the Northampton Town Hall made by Lavers & Barraud; and the window at Mere designed by Henry Holiday and made by Powell & Sons.

34 S. Brown and S. Strobl, *A fragile inheritance* (London: Church House, 2002), p. 10.

35 W. Waters and A. Carew-Cox, *Angels & icons: Pre-Raphaelite stained glass 1850–1870* (Worcester: Seraphim Press, 2012), pp. 306–11.

36 See especially J.-M. Leniaud, 'Le vitrail au XIXe siècle. Sources et problèmes iconographiques', *Revue d'Histoire de l'Eglise de France* 67:178 (1981), 83–9; C. Brisac, *A thousand years of stained glass* (Garden City, NY: Doubleday, 1986), pp. 157–9; L. De Finance and D. Hervier, *Un patrimoine de lumière 1830–2000: verrières des Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne* (Paris: Monum, Éditions du Patrimoine, 2003).

37 J. Spillman, *Glass from world's fairs 1851–1904* (Corning, NY: Corning Museum of Glass, 1986); C. Gere, 'European Decorative Arts at the World's Fairs, 1850–1900', *Metropolitan Museum of Art Bulletin* 56:3 (Winter 1998–99); J. Meyer, *Great Exhibitions: London – New York – Paris – Philadelphia 1851–1900* (Woodbridge: Antique Collectors' Club, 2006).

38 Spillman, *Glass from world's fairs*, p. 44. Only exhibits from the New York studios of Tiffany and J. R. Lamb are discussed.

39 Some exceptions are: Raguin, 'Revivals' and Y. Vanden Bemden, 'Introduction', in J. Barlet (ed.), *Art, technique et science: la création du vitrail de 1830 à 1930* (Liège: Commission royale des monuments, sites et fouilles, 2000), pp. 15–24.

40 This building, located at 2 Place de la Bourse, in the 2nd arrondissement, has been the headquarters of the Chambre de commerce et d'industrie (CCI), Paris, since 1852. The Assembly Chamber is located on the first floor of the building. The window is installed in an external wall on the eastern side of the building looking out onto the rue Notre-Dame-des-Victoires.

41 J.-F. Luneau, *Félix Gaudin, peintre-verrier et mosaiste (1851–1930)* (Clermont-Ferrand: Presses universitaires Blaise Pascal, 2006), p. 209.

42 L. Badel, *Chambre de commerce et d'industrie de Paris, 1803–2003: II, Etudes théma-tiques* (Genève: Droz, 2008), p. 374, n. 24.

43 The window is formed of eighteen leaded panels, held in place by an iron frame and horizontal saddle bars.

44 J. E. Findling and K. D. Pelle (eds), *Historical dictionary of world's fairs and exposi-tions, 1851–1988* (New York; London: Greenwood Press, 1990), Appendix B.

45 L. Daumont-Tournel, 'Classe 67. – Vitraux', in *Rapports du Jury international de l'Exposition universelle de 1900* (Paris: Imprimerie nationale, 1902), p. 53.

46 Findling and Pelle, *Historical dictionary*, p. 155.

47 The design for this window survives in the collection of the Louvre, Paris (ARO 1993 40 10). C. Bouchon, 'Le carton destiné à la verrière de la chambre de commerce de Paris par E. Grasset', *Revue du Louvre et des Musées de France* 2 (1986), 131–8.

48 For a good survey see Findling and Pelle, *Historical dictionary*.

49 R. D. Mandell, *Paris 1900: the Great World's Fair* (Toronto: University of Toronto Press, 1967), p. x.

50 P. H. Hoffenberg, *An empire on display: English, Indian, and Australian exhibi-tions from the Crystal Palace to the Great War* (Berkeley, CA; London: University of California Press, 2001), p. 27. This echoes Forster-Hahn's statement that 'dis-plays do not merely reflect or mirror society and a particular historical moment but actively function as agents that shape the historical process itself', an idea funda-mental to the study of cultural history. F. Forster-Hahn, 'The Politics of Display or the Display of Politics?', *Art Bulletin* 77:2 (1995), 174.

51 Hoffenberg, *An empire on display*, p. xiv.

52 London 1851, Paris 1855, London 1862, Paris 1867, Philadelphia 1876, Paris 1878, Melbourne 1880–81, Melbourne 1888–89, Paris 1889, Chicago 1893, and Paris 1900.

53 Amongst the more significant exhibitions omitted from this study are Vienna's Weltausstellung, 1873, the only international exhibition held in a German-speak-ing state in this period, and the Glasgow International Exhibition of 1888. Yet few stained glass exhibits appear to have been shown at these exhibitions.

54 J. Auerbach, *The Great Exhibition of 1851: a nation on display* (New Haven; London: Yale University Press, 1999); J. R. Davis, *The Great Exhibition* (Stroud: Sutton, 1999).

55 L. Purbrick (ed.), *The Great Exhibition of 1851: new interdisciplinary essays* (Manchester: Manchester University Press, 2001), pp. 1–26; J. P. Burris, *Exhibiting religion: colonialism and spectacle at international expositions, 1851–1893* (Charlottesville: University Press of Virginia, 2001); J. A. Auerbach and P. H. Hoffenberg (eds), *Britain, the empire, and the world at the Great Exhibition of 1851* (Aldershot: Ashgate, 2008).

56 A. Démy, *Essai historique sur les expositions universelles de Paris* (Paris: A. Picard, 1907); R. Isay, *Panorama des expositions universelles* (Paris: Gallimard, 1937);

P. Ory, *Les expositions universelles de Paris* (Paris: Ramsay, 1982); M. Gaillard, *Paris: les expositions universelles de 1855 à 1937* (Paris: Presses Franciliennes, 2003); M. Bacha, *Les expositions universelles à Paris de 1855 à 1937* (Paris: Action artistique de la ville de Paris, 2005); A.-L. Carré *et al.*, *Les expositions universelles en France au XIXe siècle: techniques, publics, patrimoines* (Paris: CNRS Éditions, 2012).

57 The first international exhibition held on American soil was New York, 1853–54.

58 R. W. Rydell and N. E. Gwinn (eds), *Fair representations: world's fairs and the modern world* (Amsterdam: VU University Press, 1994); R. W. Rydell, E. Findling, and K. D. Pelle, *Fair America: world's fairs in the United States* (Washington, DC: Smithsonian Institution Press, 2000). See also M. Curti, 'America at the World's Fairs, 1851–1893', *American Historical Review* 55 (July 1950), 833–56; and S. K. Hunter, *Footsteps at the American world's fairs: the international exhibitions of Chicago, New York and Philadelphia, 1853–1965* (Glasgow: Exhibition Study Group, 1996).

59 The 1879–80 International Exhibition held in Sydney, New South Wales, was the first international exhibition to be held in the Southern Hemisphere, but this focused on agriculture and livestock production, and received fewer visitors.

60 K. Darian-Smith, C. Jordan, R. Gillespie, and E. Willis (eds), *Seize the day: exhibitions, Australia and the world* (Clayton, Vic.: Monash University Press, 2008).

61 J. Parris and A. G. L. Shaw, 'The Melbourne International Exhibition 1880–81', *Victorian Historical Journal* 51:4 (November 1980), 237–54; J. Sweet, 'The Face of Australia: Colonial Design and Representation at International Exhibitions 1851– 1888' (MA History of Design dissertation, V&A/RCA, 1991); D. Cowley and M. McCormack, 'Victoria at the Great Exhibitions, 1851–1900', *La Trobe Library Journal* 14:56 (Spring 1995); K. Orr, 'A Force for Federation: International Exhibitions and the Formation of Australian Ethos (1851–1901)' (PhD dissertation, University of New South Wales, 2006); L. Douglas, 'Representing Colonial Australia at British, American and European International Exhibitions', *Journal of the National Museum of Australia* 3:1 (March 2008), 13–32.

62 This study is indebted to the increasing number of online databases of primary sources, including the British Newspaper Archives; Illustrated London News Historical Archive; British Periodicals Online; American Periodicals Online; Gallica (France); and Trove (Australia).

63 Although many windows have been located, the incompleteness and inaccuracy of records means that a complete list of stained glass exhibits is, unfortunately, impossible.

64 On the exhibitions and labour see T. Barringer, *Men at work: art and labour in Victorian Britain* (New Haven; London: Yale University Press, 2005), pp. 1–19.

65 A. Iriye and P.-Y. Saunier (eds), *The Palgrave dictionary of transnational history* (Basingstoke; New York: Palgrave Macmillan, 2009), p. 370.