VISIONS OF MANKIND

Expos from London to Shanghai

M·J·Morgan

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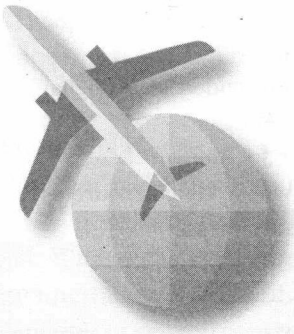

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Preface

The author of a book on the World's Fairs must first choose from amongst the myriad expositions and exhibitions which have attracted this title. It was not until the 1928 convention, attended by delegates from 31 nations, that international agreement was formally reached and the governing body, the Bureau International des Expositions (BIE) was formed. Naturally, those expositions that were sanctioned by the BIE have been included; those in Brussels in 1935, Brussels again in 1958, Montreal in 1967, Osaka in 1970, Seville in 1992, Hanover in 2000 and the forthcoming exposition in Shanghai in 2010.

Those exhibitions occurring before the BIE era require a judgement to be made as to which to include. The logical starting point is of course the *Great Exhibition* in London of 1851. Whilst other events may be held by some to have been true forerunners worthy of inclusion in a title such as this, it is a matter of general consensus that the scale and the impact of 1851 captured the world's imagination in a manner that had never been achieved before. It is in emulation of this success that the other great 19th Century expositions took place.

The aim in this Book has been to include those events worthy of being considered Universal Expositions. Either those explicitly sanctioned by the BIE, or those which – in terms of their scale, level of international representation, impact, architecture and exhibits – deserve to be mentioned in the same breath.

In any event, the purpose of this book has been to give the reader a taste of the excitement of the World's Fairs, a factual tour through the most notable expositions and to help him, or her, see how this progression is a guide and a mirror to much of the progress of humanity itself.

1. Industrialisation

1851 - 1897

The *Great Exhibition* in London, 1851, created a model that nations the world over wished to emulate. Britain in 1851 was a nation at, or approaching, the pinnacle of its powers. The achievements of industry, empire and culture were celebrated. It had provided a showcase for that nation's talents, prosperity and its very way of life. As soon as France had risen to the challenge posed by 1851, picking up the gauntlet thrown down by the English, it became merely a matter of time before every established nation would aspire to hosting such an event. They wished to do so in order to demonstrate that they too were eminent enough to play host to the world.

Industrial fairs had taken place in a number of countries before The *Great Exhibition.* That that there had been a very successful national fair in France just prior to the British resolving to host the first international exhibition, cannot be regarded as a coincidence. But these were largely domestic events and it was the shift to an exhibition that was international in character that distinguishes the 1851 fair from its predecessors. This fact, combined with the towering ambition, scale and vision that characterised the *Great Exhibition,* established it in a different league from anything that had gone before.

After the to-and-fro of the first four exhibitions between London and Paris, the centre of gravity then moved to Vienna in 1873, then the seat of the mighty Austro-Hungarian Empire. From there it travelled to Philadelphia in 1876 – at once demonstrating, and cementing, the exhibition's status as truly a global event, rather than simply an aspirant European venture.

It is very hard for us, now, in the 21st Century, to appreciate quite what an impact these exhibitions must have had on the

people who witnessed them. Today, in an age of cheap flights, mass tourism, television and the internet, the world has been brought so much closer to us that it takes quite a mental leap to imagine the sense of wonder that visitors would have felt at these 19th Century fairs. The sight of this plethora of nations, displaying their architecture, wares, pictures of their towns, exhibits showing their rituals and society, must all have been greedily devoured by visitors hungry for these fascinating perceptions of their foreign kin: so different and yet so similar.

'It is no longer true that 'Science moves but slowly, creeping on from point to point.' For centuries it crept; then it marched, then ran, and now it flies on the wings of the lightning. A new year means a new world.'
Leader in New York Tribune, January 1st 1880

We can also understand that the nature of these events, flamboyant and charged, would lead to a lively contest for the prizes on offer. This healthy, competitive instinct between nations, just as between athletes, could on occasion spill over into mistrust and unpleasantness (particularly, and understandably, where serious political tensions were at play beyond the scope of the fair), but for the most part, these proud and nationalistic affairs were played out in a chivalrous and collaborative spirit.

The competitive essence of capitalism bred many marvels that promised to improve and benefit mankind. However, innovation in military equipment was also a constant feature of the World's Fair. The ever larger exhibits by Krupps of their vast artillery pieces cast a long shadow over the early expositions. And there is a tragic irony to these weapons being displayed in host cities, such as Paris, cities that would later

fall victim to their vicious blows in a saddening reminder of the duality of man's ingenuity.

With nations standing shoulder to shoulder, as equals, the fairs also often allowed for mutual feelings, of respect and of the comradeship between all nations, to be stimulated. John Logie Baird, upon inventing the television, hoped that it would be a tool for promoting peace, since he believed that when people saw for the first time how alike distant people were, they would recognise their similarities and thus would be less inclined to fight one another. In the same way, the opportunities that the great expositions created for different peoples to see one another, frequently for the very first time, and the sense of excitement at the strange and wonderful sights, people and exhibits, must have had a profound and powerful effect on those present. We should not be surprised that whilst sometimes these meetings bred strife, more frequently they helped build bonds between men of all nations.

The expositions continue to demonstrate the limitless possibilities of man to change both himself and his environment. For though the belief in technology as a catalyst – for good or ill – of change has become second nature to modern man, it was not always so. When, in 1900, the Commissioner of the United States Patent Office, Charles H. Duell, resigned, it was rumoured he did so because of the belief, attributed to him, that 'Everything that can be invented, has been invented.' In fact, this was merely an urban myth. But what is interesting is that at the time such a sentiment was believed by those amazed by the pace of industrial change and sceptical of its ability to proceed unabated indefinitely. Now it is enjoyed as a neat joke, with the benefit, in hindsight, of one hundred years of continued and relentless invention.

The focus of the early expositions was generally technology – the new wonderful inventions of the industrial age – which is why these expositions have been grouped together. Living in an age of continuous and astonishing technological innovation, we take for granted the perpetual motion of our astounding progress. But this age is one built on, and inspired by, the awe and surprise that our forebears must have felt upon first seeing, for example, the telephone demonstrated. Imagine the hushed wonder as people heard recorded sound for the very first time or travelled in an elevator. The feeling of being at the centre of something extraordinary must have been palpable.

Those seeing the exhibitions would have returned to their own home towns and villages brimming with stories of the sights they had witnessed. The exhibitions stimulated an interest in technology. They fuelled a desire across countries and continents to participate in the glorious process of industrialisation that was reducing the amount of labour required to farm and drawing idle hands towards a new kind of life in the city. The history of the World's Fair is also the history of industrialisation and urbanisation.

The desire of all peace loving countries to live a better and peaceful life, one that could be achieved by advances in technology, was a hallmark of this era. It was the defining theme of this epoch of expositions and would remain a conceptual theme running through the all later eras.

Medals

It was decided at The *Great Exhibition* to award medals across a range of categories. This was seen as a more fitting tribute than the awarding of cash prizes, as had been a regular occur-

rence at national and regional exhibitions. There was, however, a lack of consistency in approach as different host cities took varied attitudes to the number, categories and qualities required to qualify for a medal.

Even in the same host country there was significant variation. Whereas in 1851 only one in five exhibits were awarded a prize, in 1862 the figure was nearer half. The extent to which a medal winner was distinguished from his peers remained opaque. Everyone exhibiting at the Philadelphia Exhibition in 1876 received a bronze medal – they were not classed – regardless of their merit.

The early exhibitions in France and Britain often had arcane categories and a range of medal grades. There were often inconsistencies in the demarcation of sectors to be judged, and in the judging process itself, each country being free to autonomously decide what and how to judge. Unsurprisingly, judges tended to find particular favour with the products of their host country and it was not unusual for host nations to win a sizeable share of the available medals.

Forgeries of exhibition medals led to discussions in Paris in 1878 with the aim of preserving the dignity and status of the awards. The debate about the stealing or copying of ideas and inventions led to the establishment of the Congress for the Protection of Literary Property, chaired by no less a personage than the great French novelist Victor Hugo. Similar congresses dealt with other kinds of intellectual property. The product of these congresses was the copyright system of intellectual property rights. Yet another example of how the modern world has been shaped by the World's Fair.

The Dawn of the Industrial Era

The Great Exhibition of the Works of Industry of All Nations

London 1851

Duration: 1st May - 11th October
Location: 10.5 hectares, of which 7.2 hectares for the Crystal Palace
Represented Countries: 25 countries and 15 colonies
Pavilions: The Crystal Palace
Exhibitors: 13,937 - 6,900 of which English
Attendance: 6,039,205
Ticket Price: variable, between one shilling and one pound
Cost: £913,000
Profit: £150,000 pounds

The *Great Exhibition of the Works of Industry of All Continents* was the first true World's Fair and a triumph of Victorian vision and engineering. Held in Hyde Park in the summer months of 1851, Britain initiated what would become a distinctive feature of the 19th and 20th Century landscape.

The exposition was largely the conception of two men: Henry Cole and Prince Albert of Saxe-Coburg and Gotha. The former was a civil servant and, curiously, the inventor of the commercial Christmas card. The later, husband to the Queen, was noted for leading reforms in university education, welfare and slavery. Cole was a prominent member of the Royal Society of Arts and was instrumental in it obtaining its Royal Charter in 1847. He was a keen advocate in the campaign to improve standards in industrial design. The concept for such an exhibition had arisen from the smaller, local exhibitions that had been held earlier in the century in Britain. But it was notable that, after the French Industrial Exposition of 1844 and the highly successful Paris Exhibition of 1849, which Cole attended, Britain felt it necessary to stage an exhibition with a grand and international scope.

However, realising such a project was not without controversy. Prince Albert and Henry Cole had to fight to secure it

at almost every stage of the project. Opponents vehemently argued against an international exhibition. Colonel Charles Sibthorp, M.P. for Lincoln, argued that 'rioting, robbery, rape, whore-mongering and espionage would ensue.' Lord Henry Brougham warned of 80,000 vagrants coming to London, together with 'foreign specimens of Socialists and men of Red colour.' With the memory of the Chartist disturbances of 1848 still fresh in the minds of Londoners, many feared similar public disorder. *The Times* was particularly worried about the 'permanent mutilation' of Hyde Park. But finally, in 1850, the Royal Commission for the Exhibition of 1851 was founded as the body which would manage the project. Prince Albert became the founding President and Henry Cole its chief administrator.

In order to promote the enterprise, funds were sourced by means of speeches, banquets and personal appeals. While slow at first, the pace picked up quickly with notable contributions coming from captains of industry such as Samuel Peto, a railway contractor who donated £50,000.

The centrepiece of the exposition was to be Joseph Paxton's 'Crystal Palace', as it was dubbed by the satirical journal *Punch*. As many as 254 designs, 128 of which came from London, 51 from Provincial towns and 38 from foreign countries (27 from France), were rejected before Paxton submitted what amounted to a giant greenhouse: a huge and ambitious construction made from cast iron and glass that would house the exhibition. Still, critics attacked the exposition. Their concerns challenged the possible stability of such a structure, whether it would be finished on time, whether the wind might blow it down or whether the heat generated would expand the metal, causing it to crash to the ground. Their fears were resoundingly unfounded.

The Crystal Palace was an enormous triumph of architecture and engineering, pioneering a new age of prefabrication. It was a structure that would set a precedent for expositions to come, standing at a huge 563 metres long and 138 metres wide. The Birmingham glassmaking firm of Chance Brothers supplied almost 294,000 panes which were fixed in a specially designed roof-glazing system based on economical, 1.25 metre wide sheets that determined the module for the entire design. The precision of the palace structure was a consequence of its prefabrication and the mechanical fixing that dramatically reduced the proportion of non-productive labour, common to more traditional construction methods. Cast-iron columns were strength-tested, and on-site milling and machine painting yielded miles of timber-glazing bars. The building was decorated blue, green and red, and the columns were brightened with yellow stripes. The Crystal Palace consumed the equivalent of a third of all glass produced in Britain during the previous ten years and was three times the length of St. Paul's Cathedral. Inside, visitors marvelled at its high halls that were magnificently flooded with light. Exiled German publicist and commentator on British life, Lothar Bucher, described 'the sight of it incomparable, fairylike… a piece of summer night dream in the mid-day sun.' Contrary to Victorian convention, Joseph Paxton had largely disdained decorative elements in his design. The exhibition building was meant for a determinate function, limited in time, and was built only to this end. The inside was adorned with both statues and trees that added both to the building's powerful aesthetic and the sense of man's dominance over nature.

Significantly, exhibits came not only from Great Britain but from as far as India, Australia and the Americas, with a grand collection of 13,937 exhibitors and over 100,000 individual exhibits in total. They included a vast array of tools and ma-

chines; from kitchen appliances, exotic arts and crafts, to the world's first public conveniences. Inside one could find the latest developments in the field of telegraphy, to the cutting edge advances of steam engine technology. Exhibitions were held dedicated to machines in motion, giving the concerned citizen a safe vantage point from which to view modern production processes. But, above all, a dazzling display and abundance of every available product – from the locomotive to the smallest precision clock – was on show. Rather than give cash prizes, the awarding of medals was adopted for novelty and beauty of design, as well as excellence in workmanship, with 2,918 medals awarded for high standards of craftsmanship. The fact that the Jurors took their work seriously is illustrated by the statistic that, of the 13,937 exhibitors who took part, only 3,088 (22%) received medals of any sort. Clearly, to win a medal an exhibit really had to stand out from the other exhibits of the majority of their rivals.

The international flair of the *Great Exhibition* was assisted by new historic developments. For a generation, Britain had moved towards the adoption of free trade principles. Three years after the repeal of the Corn Laws, the repeal of the Navigation Laws in 1849 removed the last hindrance of protectionism, and the majority of industrialists were prepared and ready for foreign competition. Thus, the exhibition was considered to be part of this triumphant narrative of free trade and was supported due to growing confidence in this commercial paradigm, as well as the ability of British industry to better any competitor. Approximately half of the available space was occupied by Britain and its colonies, while the other half consisted of foreign exhibitors. India was represented by products assembled by the British East India Company.

The US, at its own insistence, was given the second largest area, after France, yet failed to fill it. However, the US's con-

tributions were among the most notable, including the precision, mass produced Colt revolver and the only sewing machine exhibited. The remarkable Cyrus McCormick's Reaper, a pioneering new threshing machine that was to massively increase agricultural efficiency, also made its debut. The centre of the US section was dominated by a full-sized model of Rider' s improved Suspension Truss Bridge, surmounted by a trophy of vulcanized rubber from the Goodyear Rubber company. Further exhibits that caught the eyes of fairgoers were a Virginia grain reaper, a collection of daguerreotypes, a cotton engine (made in Bridgewater, Connecticut), many dental appliances and a model of a floating church built for the Churchman's Missionary Association of Philadelphia.

In general, machinery exhibits proved to be the most popular – and the noisiest. There was an electric telegraph that was connected to Manchester and Edinburgh, as well as to the east and west entrances and the Police Commission, in case of emergencies. Arts and crafts were given their own section. The Koh-i-noor, a 186 carat diamond, then the biggest known diamond in the world, was on display. Other events were held in conjunction with the *Great Exhibition*, like the America's Cup yachting race. The winning ship of this race, the New York Yacht Club commodore, was piloted by John Cox Stevens and was considered the embodiment of nautical achievement at the time. Queen Victoria followed the cup herself with great interest, after having played a role in the creation of the competition.

In almost every sense the event was an unprecedented success, mapping out the future potential for World's Fairs to come. The *Great Exhibition* ushered in a new era for London, one of the first occasions on which an influx of tourists on such an unprecedented scale had to be dealt with. Famous visitors to the fair included Charles Darwin, Charles Dickens,

and Karl Marx. A third of Britain's population attended the exhibition generating a profit of £186,000 (£15,640,000 in 2010 terms), making the 1851 inaugural World's Fair a universal triumph which shamed its detractors.

Even class distinctions seemed shelved temporarily. The nation's wealthy would attend on 'shilling days', uniting the ruling classes with the British public. Queen Victoria was an especial admirer, making several glowing entries in her diaries on the subject. There had never before been such a gathering of the world's nations or the people of Britain. The exhibition's message was simple and direct: not only did it demonstrate Britain's industrial supremacy but it served as a running commentary on the gospel of free trade, peace, the virtues of democracy and the British constitution.

It was decided that profits from the exhibition would be channeled into improving science and art education in the United Kingdom. Land was purchased in South Kensington which was developed as the centre for a number of educational and cultural institutions, whose legacy includes London cultural landmarks like the Victoria & Albert Museum and the Natural Science Museum. The Royal Commission of the Exhibition of 1851 continues to this day as a source of funding and scholarship in the arts and sciences.

The 1851 exposition established Great Britain as a leading light in the areas of architecture, engineering and technology. The Great Exhibition was extraordinary; one of the great moments, one of the great achievements of the 19th Century. It set the standard for all future World's Fairs to match or better. Its success championed the – at that time – unprecedented idea that a global fair, hosted by a single nation, could both illustrate and advance the progress of man.

Picking up the Gauntlet

Exposition Universelle des produits de l'Agriculture, de l'Industrie et des Beaux-Arts de Paris 1855

Paris 1855

Duration: 15th May - 15th November
Location: Palais de l'Industrie, Champs Elysées, Paris. Total space 117 square metres.
Represented countries: 34
Pavilions: 3
Exhibitors: 20,839
Attendance: 5,162,330
Ticket price: 20 centimes on Sundays
Revenue expenditure: 11 million Francs
Loss: 8.1 million Francs

The *Exposition Universelle* of 1855 was both a continuation of a tradition of industrial expositions that France had been holding since the beginning of the century and a reaction by Napoleon III to London's *Great Exposition* of 1851, held at the Crystal Palace. As such the Emperor's eagerness for the Paris 1855 exposition meant that the planning, ordered by imperial decree, began on March 8th 1853, long before the Crystal Palace even closed.

The 1855 exposition would mark the first of five international exhibitions staged in Paris in the late 19th century, a field in which they would come to dominate. Held on the Avenue des Champs Elysées, in the specially built Palais de l'Industrie, from the 15th May to 15th November, the exposition spread over 16 hectares, welcomed 34 participating nations and attracted over five million individuals over its six-month duration. And despite being set against a backdrop of competition to London's 1851; it also set out to strengthen the Franco-British alliance while gloriously celebrating France's dramatic progress in the industrial revolution. This was particularly evident since French and British exhibits receiving equal representation at the fair.