

1 – Detail of the PERSPECTIVE VIEW OF THE ILLUMINATIONS AND FIREWORKS TO BE EXHIBITED AT ST STEPHEN'S GREEN, DUBLIN..., published in *THE UNIVERSAL MAGAZINE*, London, April 1749 (detail) (courtesy National Gallery of Ireland)

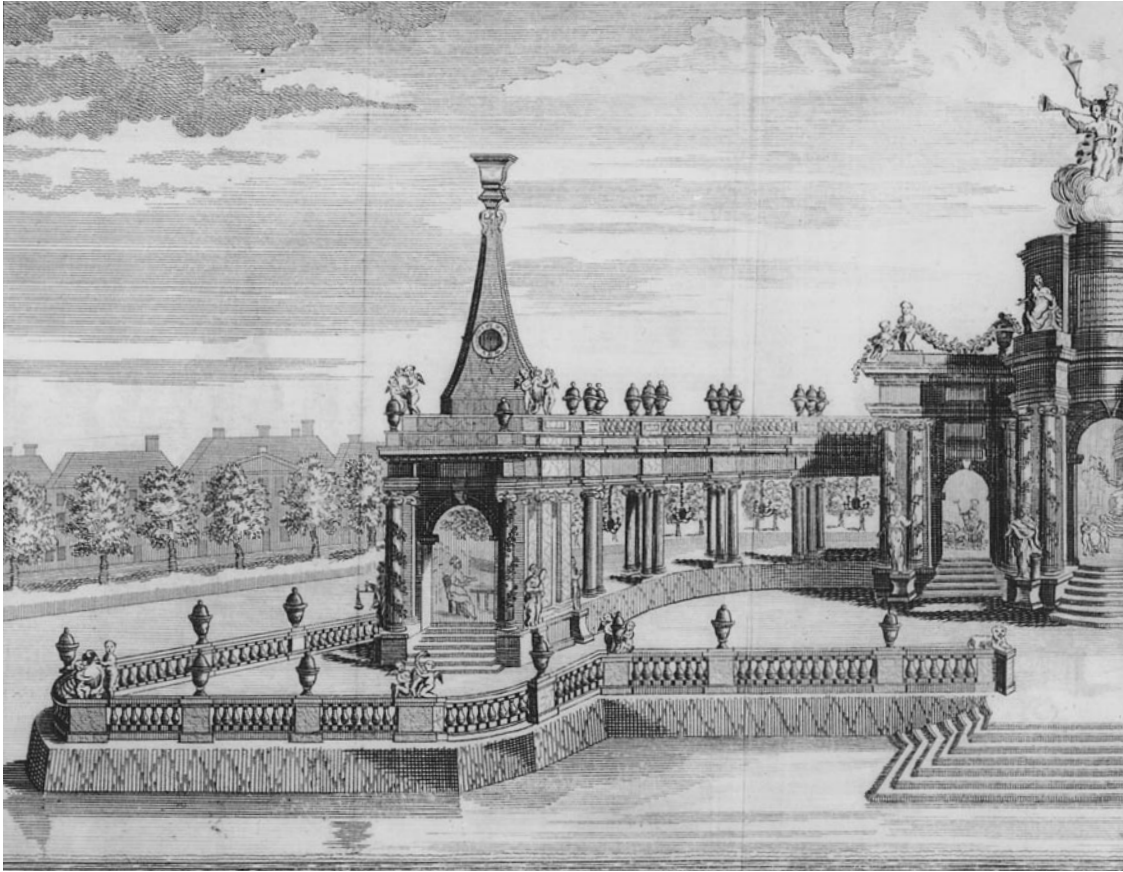
Dublin fireworks

MAIREAD DUNLEVY

THE TREATY SIGNED AT AIX-LA-CHAPELLE (AACHEN) ON 18 OCTOBER 1748 WAS celebrated throughout Europe with displays of fireworks, which, in a remarkable public relations exercise, were recorded in popular prints. The Aix-la-Chapelle Treaty concluded the War of Austrian Succession and gave some peace to European powers until the Seven Years War broke out in 1756. The celebrations, with cannon, gunshot and fireworks, were held in Paris (February), in The Hague (June) (Plate 2) and in London (Plate 3), Worcester and Dublin (April 1749) (Plates 1, 4). Government officials in Dublin and London considered that they had extra reason to celebrate: just two years after the Battle of Culloden, France repudiated Charles Edward Stuart, the young pretender, and recognised the Hanoverian succession. There was, therefore, no longer a fear that Catholics would rise up with Bonnie Prince Charlie against the Protestant establishment.

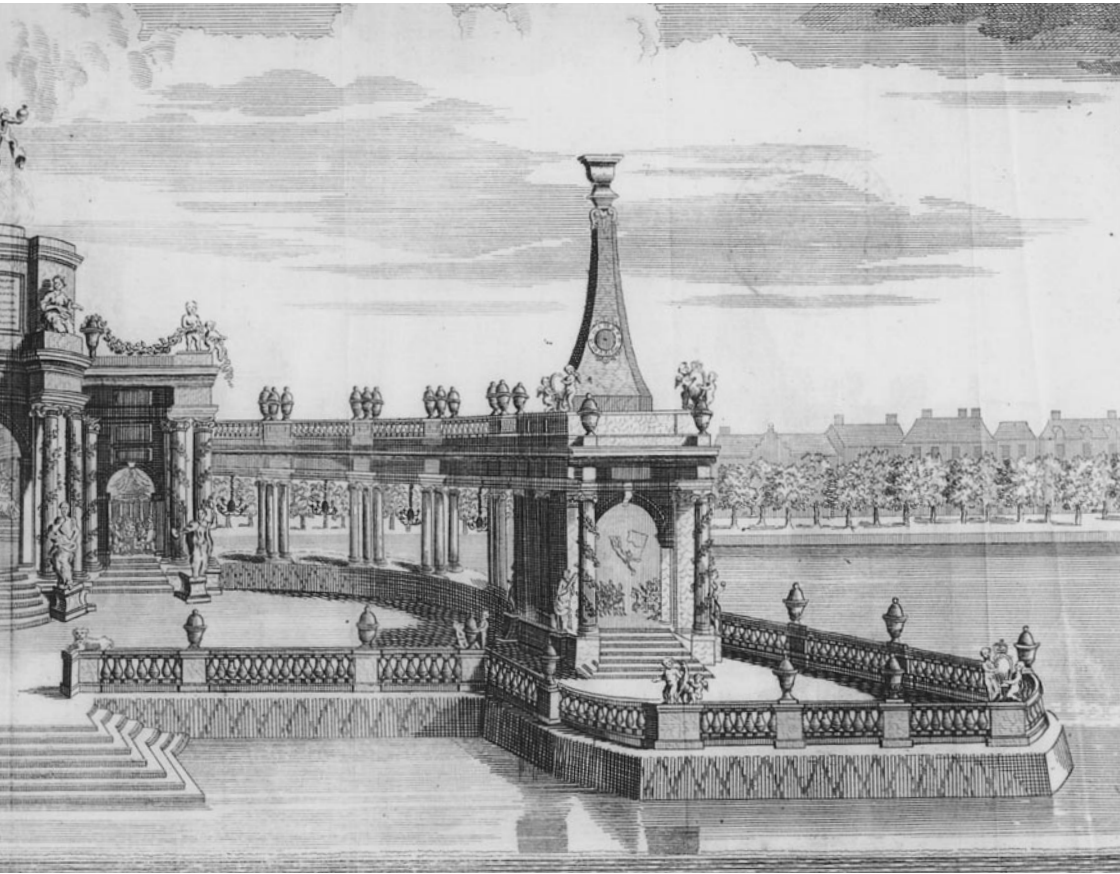
Controlled pyrotechnic displays were used to celebrate both victory and peace in major European centres in the 1730s and 1740s. A focal point of each was an ornamental timber and plaster building with painted backcloth. These were designed by reputable artists and architects, such as Jacques Philippe le Bas (1707-38) at Strasbourg and Louis-Joseph Le Lorrain (1715-59) in Rome.¹ The interest in fireworks manifested itself in the wealthy and learned indulging in scientific experiments for displays at home. In this way there was talk of mixing ingredients to make 'thunder powder', by which one could emulate cannon fire using only the heat of a candle, or get the effect of a room on fire through the use of brandy, camphor and a candle flame.

The basic ingredient used in fireworks at that time was saltpetre, a substance with which there was such familiarity that a Dublin newspaper counselled that to cleanse one's system in spring, a little should be sprinkled on the morning stirabout.² In fireworks, saltpetre produced a bright flame when mixed with an inflammable substance, and so in a basic charge it was mixed with meal powder, brimstone and charcoal.³ However, it first had to be purified by boiling slowly while stirring gently



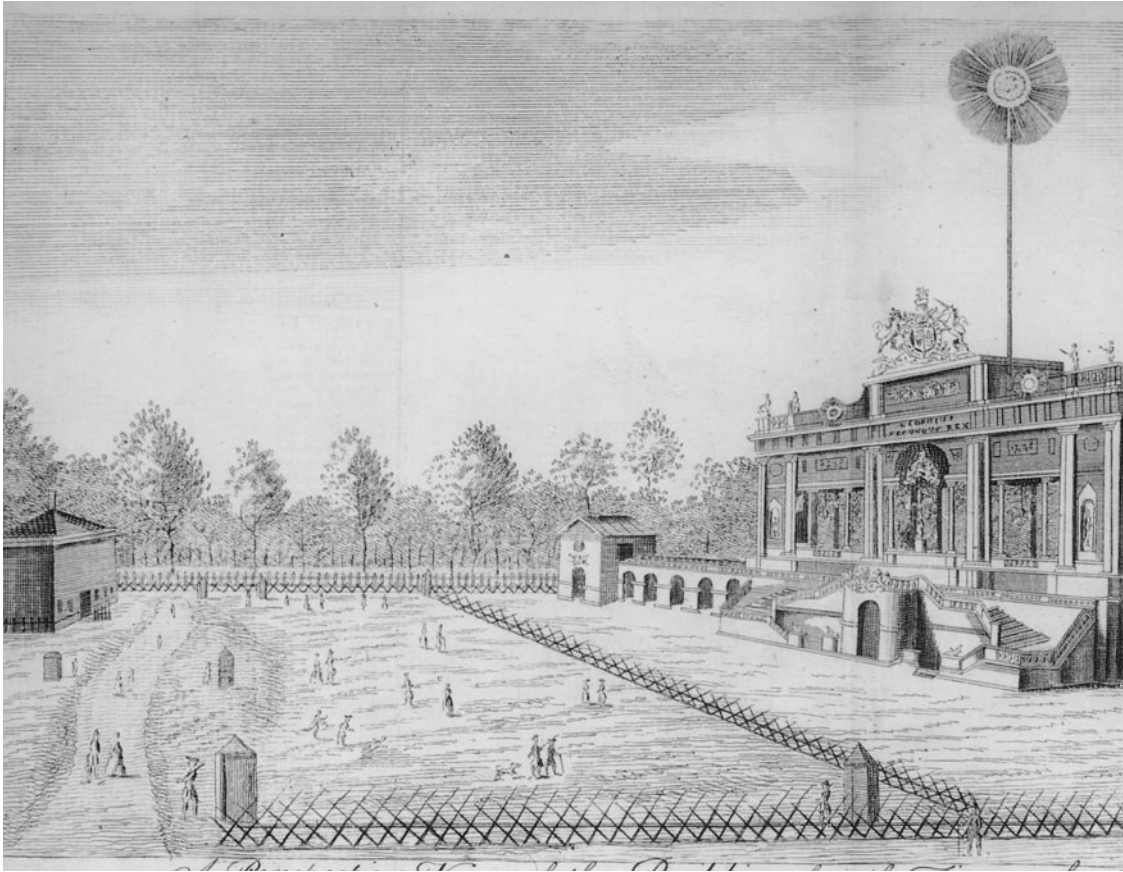
2 – A view of the grand theatre and fireworks erected on water near the court of The Hague and exhibited 18 June 1749.

until dissolved, then cooling and pulverising. The charcoal (from willow, lime or hazel wood) had to be sieved finely. To achieve a manageable control in firing, expertise and care were required in mixing the correct proportions and then ramming the combined components with careful pressure into the appropriate casing. *The Laboratory, or School of Arts* (published in London in 1740, with a second edition in 1755) recommended that the casings for rockets should be of turned hardwood (plum, box, cypress, chestnut, etc) or ivory, with those for large rockets cast in brass or copper.⁴ Such materials allowed the cases to be made in columns with appropriate architectural embellishments. Other containers mentioned included tin, pasteboard, linen and leather, but as casings could shatter when fired, thus injuring spectators, there was a decided preference in 1749 for cases of paper and knitted cord bags.



This was engraved for Sarah and John Exshaw, Cork Hill, Dublin, and published in their LONDON MAGAZINE. The 'theatre', 336 feet wide, had Ionic columns festooned with artificial flowers. Transparent paintings on silk were used in each of the three arches to represent peace, good government and trade. (courtesy National Library of Ireland)

The variety of fireworks made was great, each type having its own nomenclature – water-rockets, air balloons, swarmers, water ducks, serpent boxes, gold and silver rain, etc. Care had to be taken with balance, weight in the water, diameter of opening and storage before firing. There was emphasis too on the advice that the inner shafts should be carefully turned so that the rocket would fire straight, and that the dimensions and lengths should be calculated according to the height required in firing. Special effects were achieved with compositions as varied as powdered glass, cornflour, sawdust, camphor, gum arabic and animal sinews. Recipes were complicated. For example, a water-rocket was made of paper in which coal dust or tanner's bark, as well as iron filings for sinkage, was charged and tied at the neck. The cord was shaped with brandy dough, or meal powder moistened with brandy, then glued



3 – A perspective view of the buildings for the fireworks in Green Park, London, published in *THE LONDON MAGAZINE* (Dublin, 1749).

over with paper. After dipping in wax and pitch, it was then ready for use.

Preparation of each item was tedious. To make ready the fuse or ‘match’, two or three strands of hemp, tow or cotton were lightly twisted and then placed in a clean, glazed earthen pan. On that was poured four parts of ‘good white wine vinegar’, two parts of urine, and one part each of brandy, purified saltpetre and meal powder. It was boiled quickly until the liquid evaporated. The treated tow was then rolled in meal powder and allowed to dry in the sun.

The London fireworks display took place in Green Park. Some criticised the proposed expenditure by the authorities, pointing out that at that time they were unable to service the public debt or provide for the soldiers and seamen disbanded after the war.⁵ Unconcerned about such trivialities, a budget of £14,500 was provid-



The balcony was built for the hundred musicians who played there before the fireworks began. The pavilions at either end were stores for the engineers. Cannons placed in the arcades were fired to signal the beginning and end of each firework section, while the main cannon contingent was placed on Constitution Hill nearby. The central feature, 'The Sun', burnt in a flame for a long time. (courtesy National Library of Ireland)

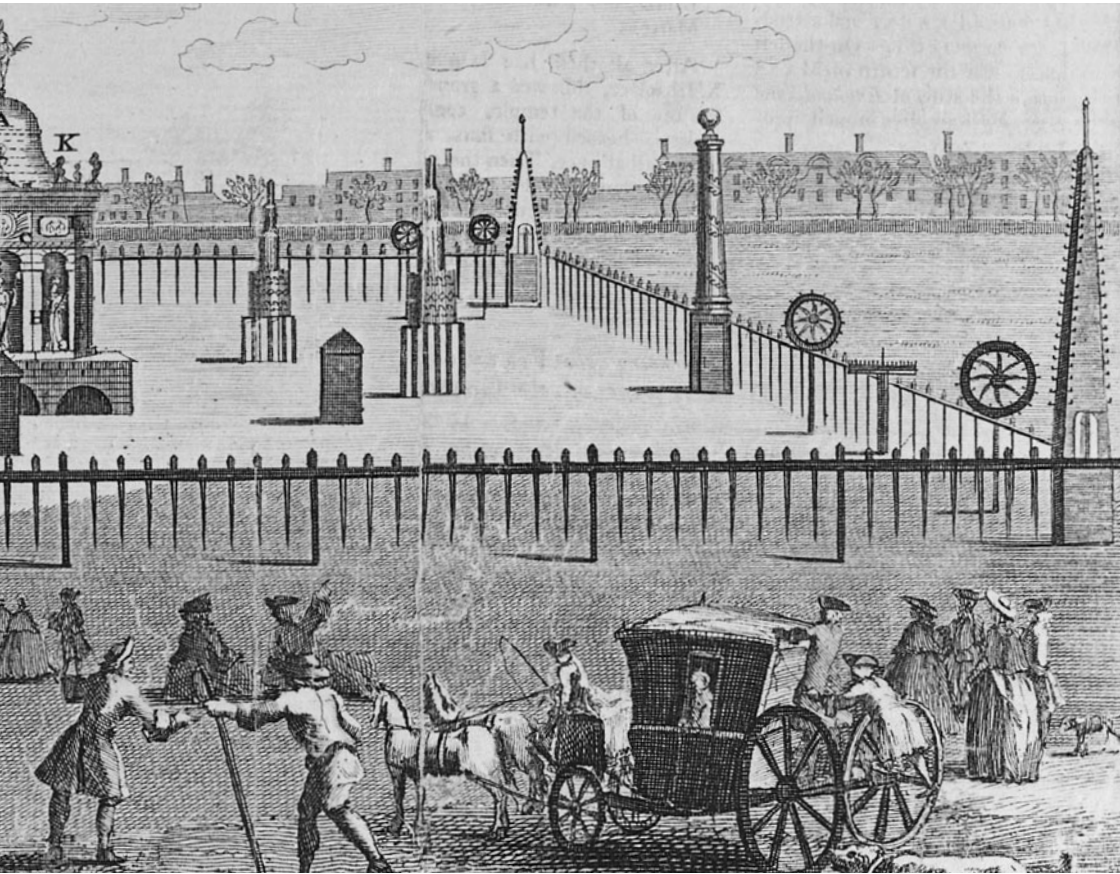
ed. The central structure for the display was 144 feet long and had the appearance of a permanent building of stone blocks with a balustrade. However, it was built in a theatrical method in which the wood carcass was covered with sized and white-washed canvas. Using that same expertise, the set was furnished with 'transparent pictures', painted on silk and with statues, plaques and inscriptions. Through classical symbolism, these communicated admiration for King George II who, through achieving peace, had ensured a growth in commerce, trade and agriculture, a degree of liberty and justice, and an appreciation of such values as temperance.⁶ The set, which faced onto St James's Palace, took almost six months to build, with unprecedented extra work on Sundays to meet the deadline.

Apart from the building, a hundred pieces of polished brass cannon were



4 – THIS PERSPECTIVE VIEW OF THE ILLUMINATIONS AND FIREWORKS TO BE EXHIBITED AT ST. STEPHEN'S GREEN, DUBLIN ON THE DAY OF THANKSGIVING FOR THE GENERAL PEACE CONCLUDED AT AIX LA CHAPELLE, 1748, published in *THE UNIVERSAL MAGAZINE*, London, April, 1749.

moved by water from the Tower for the military display. Another important element was music. Frederic Handel was commissioned to compose two 'grand' pieces, one of which was performed by a hundred musicians immediately before the fireworks. Then, at 8.30pm, the first single rocket, symbolising the king, was fired outside the library. It was answered by cannon fire, and from then until after 2am the symphony of rockets, cannons and gunshots entertained all. It was not without its problems. Some rockets set fire to part of the north pavilion and carpenters had to cut away timbers while water engines doused the flames. Another rocket misfired and set a young woman on fire. Because her neighbours stripped off her clothes to stays and petticoat she was saved, although scorched on face, neck and breast. King George,



As elsewhere, the Dublin fireworks installation was prepared in time to allow the public to admire it at leisure; however, it must have been for a limited period as there was concern that rain would damage the explosives. Indicated here are the temple of peace (A), the bust of King George II, crowned with oak (D), the busts of Roman soldier Scipio, and emperor Augustus Caesar (G). The statues marked are Justice (E), Liberty (B) and Fortitude (H). (courtesy National Gallery of Ireland)

his son William, Duke of Cumberland, and friends who watched the performance from the safety of the palace library retired to bed about midnight.

Dublin, with political astuteness, forwarded an address of gratitude to the king, under the city's seal, in December 1748, immediately after his return from signing the Treaty.⁷ When peace was officially proclaimed on 21 February, the celebrations began, with the 'great guns' being fired in Phoenix Park and bells rung throughout the city.⁸ By then, planning for the fireworks was already well advanced, as in January 1749 *The Universal Magazine* published a detailed description of the proposed layout.

As elsewhere, this was a government celebration which had to be performed

with military precision, and so it was controlled by the Surveyor General, Arthur Jones Nevill. Although his budget for the night was less than a third of that of London, £500 was a respectable sum.⁹ As with London, music was required. Although Handel's *Music for the Royal Fireworks* was not performed in Dublin until the following autumn, a choral work, *Ode to Peace*, was composed by the new organist at St Patrick's Cathedral, Richard Broadway, and performed to popular acclaim in the Philharmonic Room, Fishamble Street.¹⁰ It is probable that Nevill involved Joseph Tudor (c.1695-1759) for the 'stage set'. Although best known as a landscape painter, Tudor also painted scenery at Smock Alley Theatre. His direct involvement might explain why, as early as March, Tudor was able to advertise that he had in preparation an engraving of 'an exact perspective view of the illuminations and fireworks as they are to be exhibited in St. Stephen's Green'. The venue was selected because it was an established public space where guilds assembled and public hangings took place.¹¹

As built, the outer limits of the fireworks was enclosed with a balustrade of large rockets, about ninety-two metres square. Within were obelisks, fire-wheels, fountains, 'cascades of fire', a temple of peace, and pillars variously lighted and ornamented with oak leaves. It would seem that, for safety reasons, the large rockets in Dublin were made by rolling layers of damp paper around a wooden core. When dry, the case was strong enough to allow the composition to be rammed in carefully. It was held that when prepared and balanced correctly, such rockets would fire slowly at first and then more rapidly, rising to a height of about 457 metres.¹²

The temple, surmounted with a gilded figure of peace, was almost ten metres wide and twenty metres high. It was lit from within and decorated with many statues, reliefs and inscriptions, which, through classical symbolism and figures of royalty, conveyed messages, which seem to have inconsistencies today. Facing the west of the Green was a statue of liberty, with staff and cap, holding a medal of King William III. Above was a bust of King George II crowned with oak leaves. Convenient to them were representations of Minerva, the goddess of wisdom, and statues of Justice and Piety. The Duke of Cumberland, the soldier son of George II, who fought in the war and commanded the army at Culloden, was represented on the south side where he was complimented with the statues of Honour and Security, each carrying laurels, and a symbolic representation of Hercules.¹³ The rewards of peace were suggested too with representations of husbandry, and success in agriculture and the linen industry. Facing Trinity College was a statue of science with Apollo, the god of learning and patron of the arts, pointing to that institution. Associated with science were the statue of Prudence, a bust representing Philosophy talking with the Greek philosopher Socrates, and a muse bringing a poem to Homer.

Facing the east of the Green were representations of Temperance, Trade and Hope, and a relief showing a young man and woman holding a wreath of myrtle at the altar of love.¹⁴

On the day, 25 April, the ceremonies began with the lords justices walking in state to Christ Church Cathedral where Richard Pockocke, clergyman and traveller, delivered the sermon. In the evening, the Temple of Peace, obelisks and pillars were illuminated and the display was fired in 'three courses'. The signal to begin was a rocket fired at a slant. Twenty-four cannon replied, followed by three vollies of shot. Next came one hundred rockets of one, two and four pounds, each headed with stars, rain, etc, followed by a flight of fifty small rockets, three fire-wheels, six serpent boxes, six balloons, a hundred large rockets and a 'fountain of fire'. The courses that followed were of the same symphony of cannon fire and gunshot, answered by rockets, serpent boxes, 'balloons' and stars. The evening ended with one 'flight of four hundred rockets variously headed'.¹⁵ While all could marvel at the lights in the sky, the grandstand event seems to have been for government-approved personnel, who, fearless of ground glass or iron filings and untroubled by noxious smells, enjoyed the event. The only recorded fatality was that of a young man who was stabbed by a sentinel's bayonet as he tried to get into the Green illegally.

The prints published of the various firework displays to celebrate the Aix-la-Chapelle Treaty were intended to be popular. Government must have been particularly pleased that Dublin publications illustrated so many of the celebrations and that they paid particular attention to their own. For that, Joseph Tudor commissioned Thomas Chambaras (c.1724-89) to make an engraving of his picture of the planned set (Plate 3).¹⁶ Copies of his engraving, measuring 22 x 13 inches, were printed on 'the finest super Dutch royal paper' and sold in a number of prestige Dublin outlets at a shilling and sixpence each. From early March, Tudor regularly promoted his print through newspapers, and in April *The Universal Magazine* reproduced it in reduced size. Tudor's success meant that others copied his work, and although there were many other official firework displays throughout the eighteenth and early nineteenth century, as well as private firework displays for the wealthy, the frequent reproduction of this particular print has meant that to many this is the best-known historical fireworks display held in Ireland.

ACKNOWLEDGEMENTS

I would like to thank Barbara Young for advice on the text, and the National Art Library, Victoria and Albert Museum, London, for access to *The Laboratory, or School of Arts*.

ENDNOTES

- ¹ I am grateful to Barbara Young and Edward McParland for this information.
- ² *The Dublin Gazette*, 2 March 1776, 1.
- ³ *The Universal Magazine*, London, March 1749, 138.
- ⁴ *The Laboratory, or School of Arts*, translated from the High Dutch (London 1740), Appendix II; G. Smith, *The Laboratory, or School of Arts* (London 1755) 275-327.
- ⁵ *The Gentleman's Magazine*, London, May 1749, 205. At that time, Dublin offered disbanded soldiers work in fixing pavements.
- ⁶ *The Dublin Courant*, 2 May 1749.
- ⁷ Lady Gilbert (ed.) *Calendar of Ancient Records of Dublin*, IX (Dublin 1902) 282-84.
- ⁸ *The Dublin Courant*, 18 and 25 February 1749.
- ⁹ The usual cost of such firework celebrations in Dublin was £200 per night. E. McParland, *Public Architecture in Ireland, 1680-1760* (New Haven and London 2001) 17.
- ¹⁰ *The Dublin Courant*, 11 and 15 April 1749; B. Boydell 'Music 1700-1850', *A New History of Ireland IV: Eighteenth-century Ireland, 1691-1800* (Oxford 1986, reprint 1999) 580-82.
- ¹¹ *Faulkner's Dublin Journal*, 3 February 1750. The Green was criticised at the time because it was swampy and the Beaux Walk required gravel. However, there were plans afoot to make it more fashionable, and, indeed, a nurseryman, Mr Landre, said that he would open his gardens there by subscription in the manner of Vauxhall in London.
- ¹² *The Gentleman's Magazine*, London, February 1749, 56.
- ¹³ Two years earlier, Cumberland had been publicly honoured with a statue on a column in the square at Birr, which itself was named after him. This was the first monument to the duke not only in Ireland, but in 'the three kingdoms'. This profession of local loyalty and good public relations echoes elements of the Dublin fireworks, as does the allegorical language in which it was commemorated in *Faulkner's Dublin Journal*. See W. Laffan, 'From Paper to Pillar, "Miscelanea Structura Curiosa" and the Cumberland Column', in W. Laffan (ed.), *Miscelanea Structura Curiosa* (Tralee 2005) 25
- ¹⁴ *The Dublin Courant*, 22 April 1749.
- ¹⁵ *The Dublin Courant*, 29 April 1749.
- ¹⁶ W.G. Strickland, *A Dictionary of Irish Artists*, 2 vols (Dublin 1913, reprint 1968) II, 462-64.