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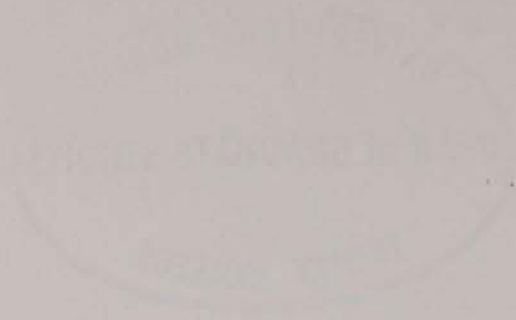
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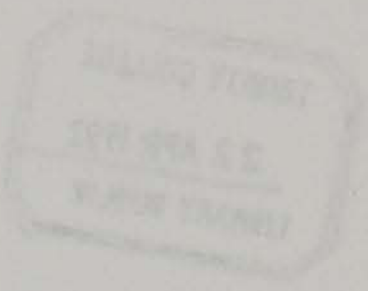


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THE USES OF PHOTOGRAPHY IN IRELAND

1839-1900

3 VOLUMES

VOLUME II

Peadar Slattery, F.R.P.S.

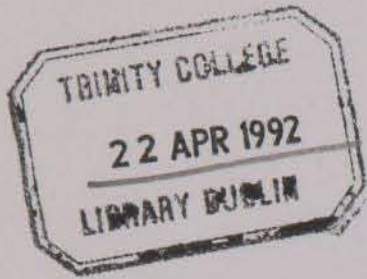
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POLICE PHOTOGRAPHY

1. Photography and the fenians, 1866-70

When the fenian crisis occurred in Ireland in 1866 and 1867 many persons were arrested. Some were charged, found guilty, and jailed, while hundreds were arrested and held for a period. When the Irish government decided it was safe to do so these prisoners were set free conditionally. Convicted fenians were photographed 'as ordinary convicts' and the photographs used for prison record purposes. If, however, a convicted fenian prisoner was released, then such prison photographs were available to police authorities in Ireland and Britain for surveillance and identification purposes.¹

In November 1866, Patrick Joseph Murray, a director of convict prisons, made clear the legal position in relation to photographing 'untried political prisoners' arrested under the habeas corpus suspension act. 'Each untried political prisoner is photographed if he does not object but I have no authority to compel him to sit if unwilling', he reported. Nevertheless the chief secretary's correspondence register for 1866 has many entries recording the taking of photographs of untried political prisoners, supplied by the directors of convict prisons to the under secretary, Sir Thomas Larcom, for immediate transmission to the Home Office in London.² The untried political prisoners did comply with the request to be photographed in 1866.

When the authorities in Dublin were satisfied that a prisoner should be released, an order for discharge was made out indicating the conditions under which the prisoner

was being released; usually these were that he return either to his home in Ireland or go to Britain or America. The prison authorities in 1866 were also directed to provide 'a description of the person of the prisoner, accompanied, if possible, by a photograph'. Simon Murnan, for example, was released from Kilmainham prison on condition that he go to England. His photograph and description were routinely sent to the Home Office. Mountjoy male prison supplied the descriptive particulars and photographs of untried political prisoner Daniel O'Brien on the evening he went to Liverpool. Thomas Devane was photographed and discharged on bail on the understanding that he return to his home at Nenagh. His photograph would have been available to the police in Ireland should he come to their notice again.³

Some political prisoners were not photographed in 1866. Patrick Dunne, a school teacher from Carlow, was confined in Kilmainham and Mountjoy. Price, the governor of Kilmainham, explained a year later when a photograph was required: 'at the time he was confined here the practice was to take the photographs only of prisoners for trial or of some previous notoriety and no general order was then issued'. He could not supply a photograph of Dunne.⁴

In 1867 the regulations governing the photographing of political prisoners were amended. A general order to photograph all untried political prisoners who were about to be released was in operation in January 1867 and an order was made on 19 June to photograph all released political prisoners who were going to America. One or two men did put up a token resistance to being photographed. Richard Quinn, originally from Newport, County Mayo, who had come from San Francisco, told Murray 'that he would

never consent to have his photograph taken in prison'. Murray felt that the unrepentant Quinn should be sent to Naas or Kilmainham prison. Larcom sent him to Kilmainham, ordered the preparation of all the necessary release papers and had the governor of Kilmainham instructed to release the prisoner 'upon having his photograph taken'. Within a day of arriving in Kilmainham, Quinn sat for his photograph and was discharged.⁵(plate 95).

The guarantees given by untried political prisoners to return to named destinations were treated seriously by the Irish government and were checked by the local police. Working through the Home Office the Irish government was able to find out whether ex-detainees had gone to their agreed destinations. On 23 July 1866 Larcom attempted to find out the address of Thomas Gibson and Austin Mealy. Both their photographs had been sent to the Home Office in July and would therefore have accompanied the Home Office enquiry to Liverpool concerning them. Detectives at Liverpool and 'the two Irish officers' there made enquiries about the two men but failed to discover any trace of them. In a further example in August, Thomas McManus and James Crompton could not be found in the Scotland Road area of Liverpool; in the course of the enquiries the 'descriptive returns and photographs were shown to the Irish officers' stationed at the port of Liverpool. In a successful search the address and workplace of Thomas Balfe was established at Ashton-under-Lyne, Manchester. Balfe's photograph had been sent to the Home Office on 15 August 1866 and was available in the search for him.⁶

Photographs of released political suspects were also used by the police in Ireland. All those who had been discharged without trial were expected to avoid fenian

activity or they would be re-arrested. Richard Quinn of Newport had agreed to be of 'good behaviour' for two years. The police used photographs to investigate a released fenian named Kavanagh. Head-constable Thomas Talbot observed a fenian procession and demonstration in memory of the Manchester martyrs in Dublin on 8 December 1867 and was convinced that a man named Kavanagh, from Carrick-on-Suir, 'commanded at the procession'. The suspect was 'mounted on a charger' and wore a 'large black crêpe' around his hat and a 'sash over his shoulder with a harp on it'. Larcom was able to show that a man named Edward O'Kavanagh from Carrick-on-Suir had been discharged six months earlier. He had been photographed then and a copy was sent to Head-constable Talbot, who stated, on examining it, 'that [number] 375 is the photograph of the Kavanagh mentioned' in his report. This photograph was also sent to Superintendent Daniel Ryan of the 'G' division of the Dublin police. Ryan had O'Kavanagh's photograph 'shown to the officers posted along the line' of the procession but they did not recognise the person in the photograph as resembling anyone actively involved in the procession.⁷

In one case a photograph of an untried political prisoner was used to investigate non-political crime. John Singan (or St. John) was an untried political prisoner held in Mountjoy in June 1866. A warder there was 'under the impression' that if the chief constable at Wigan, England, was contacted it might be shown that Singan had been involved in a murder there some years previously. In the established manner a photograph and covering letter were sent to the Home Office, which passed it on to the Lancashire police. Singan's photograph was shown to men who had worked at the murdered man's workplace. 'None of

them recognised the photograph', the chief constable reported, nor remembered anyone of the name Singan. Singan was cleared and subsequently released on condition that he return to England.⁸

The fenian leader James Stephens had escaped a fortnight after he was arrested on 11 November 1865. The authorities knew he was in America in 1866 but feared he would return either to Ireland or the continent in order to lead a rebellion in late 1866 or early 1867. Larcom was intent on arresting Stephens. It was decided to watch the ports in France for him. Christopher Joseph de Gernon, a R.M. in Tipperary, was sent to organise the surveillance. His principal weapon in the hunt for Stephens was photography. He spoke to Larcom on 21 November about his modus operandi and in a letter the next day suggested that he should, through the Foreign Office, communicate with British consuls and vice-consuls along the western coast of France 'enclosing to each a photograph of James Stephens' and that he should personally call them.⁹

On 3 December, de Gernon, by then in Paris, received a letter of introduction to the consuls from Lord Cowley in Paris. He had brought photographs of Stephens with him and he ordered a number of copies 'for distribution at the different consulates'. In this way de Gernon could have many ports watched by those familiar with Stephens's appearance. He visited a number of transatlantic ports: Le Havre, Cherbourg, Granville, St. Malo, Brest, La Rochelle, Rochefort, Bordeaux, Pauillac, and Arcachon.

Wherever he went de Gernon distributed photographs of Stephens. At Cherbourg the British vice-consul agreed to show the photograph to the commissaire de police. The consul at St. Malo accepted a photograph of Stephens and

showed it to his contacts as he made enquiries. Declining to go to northern Germany to call at Hamburg and Bremen because it would be a 'useless expense' de Gernon wrote nevertheless to the consul-general of Hamburg 'enclosing him a photograph'. De Gernon had spent a month visiting the ports but without success. His photographic expenses came to over £3.¹⁰

Larcom received information about fenians and fenian intentions from many sources. One of his informants in America was Pierrepont Edwards, acting consul in New York. On 11 April 1867 Edwards wrote to Larcom informing him that a fenian emissary was travelling to Queenstown or Liverpool. Knowing his dispatch would arrive too late to be of use, he still sent a photograph of the individual, 'which although perhaps late, I think best to send to you in view of the possibility of [it] being turned to account'. Edwards continued to send reports in April and on a number of occasions in June. On 11 June he wrote of 'three fenians ... whose names and personal descriptions I enclose'. An earlier letter sent from Edwards to London dated 1 June eventually came to Larcom in Dublin Castle. Edwards had noted that William R. Roberts, the president of the 'senate wing' of the Fenian Brotherhood, had taken passage on a French ship bound for Brest. Edwards enclosed photographs of Roberts 'which I have obtained through my agents and which may possibly be of use for police purposes'.¹¹

In January 1868 Lord Mayo, who had been appointed chief secretary for Ireland in 1866, required that photographs of every fenian prisoner be sent from Dublin to the Irish Office in London. Flewitt, the deputy-governor at Kilmainham gaol, supplied a large proportion of the

photographs sent at this time. Purcell, the photographer at Mountjoy, supplied 394 photographs of 'untried prisoners' by 10 January with more to follow. The Home Office and the Irish Office therefore had their own sets of descriptive particulars and photographs of fenians and fenian suspects arrested in the 1860s. These were available for investigative and surveillance work.¹²

Fenian activity in the late 1860s and an outbreak of ribbonism in the early 1870s, particularly in Westmeath, ensured the continued use of photography as a surveillance and investigative tool. Rebellion and organised outrage had encouraged the government to use every weapon it could in the fight against crime. Threatening letters, for example, were photographed in numerous instances in 1869 and 1870. In 1868 Thomas Flewitt of Kilmainham prison had photographed the hand-writing of an escaped fenian, Colonel Thomas J. Kelly, and the photographs were sent to London for the police. Flewitt produced 112 negatives of threatening letters for the government in the period September to December 1869. A total of 577 prints were made from these. In the first eight months of 1870, 357 prints of threatening letters were produced by Flewitt from 79 negatives. This brought the number of photographs of threatening letters to over 900.¹³

2. Photography, the police, and ordinary crime, 1870-1900

In the quieter times of the 1870s photography was still used, but only routinely, to maintain surveillance on prisoners released on licence. As registrar of habitual criminals, one of John Barlow's functions was to acquire three photographs of all prisoners released from Lusk farm-prison. Although Barlow was an officer in the prison

service, he had, in the wider sense of the term, a police role. It was his function to find out a prisoner's destination before his release and to have copies of prisoners' photographs ready for the police in the area where the prisoner was going. If a prisoner did not disclose his destination his head was shaved so that in the early days of his release he could be observed by the police. In the case of a convict released on licence in 1876 and bound for Derry 'some photographs' of him were sent there to assist in his identification and surveillance.¹⁴

From 1870 to 1876 the particulars in the habitual criminals register had not been available to the police except when they asked for them. It can be assumed that when particulars of habitual criminals and discharged convicts were sought and obtained between 1870 and 1876, photographs, being an integral part of the identification procedure at the habitual criminals office, were also supplied. Both prison and police authorities often sought descriptive particulars to identify a person; the police also required such information for the surveillance of a suspect. The total number of descriptive particulars released annually to prison and police authorities for the years 1870-76 ranged from 600 to 1,100 a year. The system was regarded as inefficient.¹⁵

Two changes occurred in the mid-1870s, legislative and organizational, that attempted to restrict the use of prison photography and to increase the effectiveness of descriptive particulars in order to control habitual criminals. Amending legislation, the prevention of crimes amendment act of 1876, restricted the obligation to be registered and photographed to certain classes of

prisoners. As a result the register became more useful. It had been cumbersome to use because there had been a 'mass of names and descriptions' on it. Much time had been lost searching through records of persons convicted of 'trifling offenses'.¹⁶

From 1877 work was begun on a retrospective list of all habitual criminals liberated since 1870, to be sent to all police barracks and prisons in Ireland. This contained, when completed in 1881, the particulars of 8,000 criminals. From 1881 a yearly list of descriptive particulars of habitual criminals was printed and similarly circulated. Arising from the reorganisation begun in 1877 the number of prisoners' particulars circulated annually ranged from 200 to 300, until, in 1882, the figures dropped below 200 annually, at which level they generally remained to the year 1900.¹⁷

3. The land war, 'skirmishing', and home rule, 1879-90

With the start of the land war in 1879 and the emergence of a more militant Irish party in 1880 the Irish government renewed its interest in keeping files on political suspects. Suspects were arrested under the Protection of Person and Property (Ireland) Act, 1881, and, the supporters of those held in Dundalk prison in December 1881, published a celebratory montage, decorated with a shamrock motif, of sixteen photographs of prisoners. The montage was presumably produced to gain publicity and raise money. A copy, which had portraits of land leaguers and fenians, was obtained by the government and kept on file.¹⁸ (plate 96).

The Phoenix Park murders in May 1882 generated further interest in the use of photography by the authorities.

Within a month of the assassination of Burke and Cavendish, Colonel Henry Brackenbury sent an agent to Paris to watch the fenians there and a man named Egan was identified from his photograph. There were two members of the Land League named Patrick Egan but the man identified in Paris was almost certainly the treasurer, who moved there in February 1881, to protect the funds of the league and to set up its financial centre soon after the arrest of Michael Davitt, a member of the executive. Edward George Jenkinson, assistant under secretary for police and crime, sought six copy photographs of each of the accused and of witnesses in the case. These were sought by Jenkinson in March 1883. He was 'very anxious' to obtain them, totalling 156, and it can only be assumed that he envisaged further investigations aided by the available photographs. There were twenty prisoners involved.¹⁹

The government was interested in acquiring copies of photographs of the leading members of the home rule party and the land movement. When the National League was founded in October 1882, its relationship with the Irish party was closer than that which had existed between the party and the Land League, and in February 1883 the government added a collection of photographic portraits to its files. Members of parliament, such as Biggar, Dillon, Parnell, Redmond, O'Kelly, O'Connor, and Healy were included. There were at least four copy photographs available in each instance. A 'land league group' acquired at this time for half-a-crown continued the practice of using group or composite photographs as a source for making up single portraits of suspects. Land leaguers whose portraits had been acquired at this time included Michael Davitt, Patrick Egan, William Doriss, and J. R. Cox.²⁰

In the 1880s some fenians organised a 'skirmishing' campaign against Britain, using dynamite to cause explosions in British cities and particularly in London. O'Donovan Rossa advocated such a policy; the campaign of explosions was most intense in the period 1881 to 1885. The idea was to bomb public places such as railway stations and well-known buildings like the commons' chamber at Westminster, and Buckingham Palace. In March 1883, bombs exploded in London. When the bombers were caught it became clear that they were using aliases and photographs were sent to America to establish their identities. Photographs of 'the London prisoners', which included Dr Thomas Gallagher, John J. Murphy, William Lynch, Thomas Clarke, and John Kent, were also sent to Dublin to assist identification.²¹

Jenkinson could easily justify the continued surveillance of and the keeping of files on nationalists such as John Redmond, Thomas Sexton, and Patrick Egan. Redmond and Sexton, for example, had attended a land league convention in Boston, which Jenkinson regarded as a front for Clann-na-Gael. He believed that Egan, while ostensibly supporting the parliamentary group, was 'heart and soul with the dynamiters' and that Redmond was on good terms with Clann-na-Gael in America. John Sweeney, a Scotland Yard detective, was involved at this time in watching the Irish M.P.s 'with greater vigilance', and it is possible he was assisted in this by photographs sent from Dublin.²²

By the mid-1880s the total number of Irish and American fenian leaders of whom photographs were on file in Dublin was twenty-six. The members of parliament Joseph G. Biggar, John Redmond, and James O'Kelly were included in this list of fenians. The photographs of other

nationalists were also on file: Healy, Parnell, William Redmond, and Father Sheehy. The total number of photographs of active nationalist leaders on file in Dublin Castle at this time numbered about forty.²³

One of the problems associated with photographs as a means of identification soon became apparent. In the case of twenty-one photographs on file the date the photograph was taken was 'not known'; nine of these were 'supposed' to have been taken in 1881. Others had been taken more recently in 1883 and 1884 but the O'Donovan Rossa and Devoy portraits, of interest because of the dynamite campaign, were dated 'about 1867', being almost twenty years out of date. The special crime department was well aware of this drawback in photography. R. E. Beckerson, a clerk in Dublin Castle, writing in December 1886 to Jenkinson about a photographic montage of suspects held in Dundalk prison five years earlier, stated: '... but as the photograph was taken in 1881 the originals may have changed'. Despite this drawback he believed it would 'be well to keep this with our photographs of suspects'.²⁴

The police and crime department in Dublin castle in the mid-1880s drew on non-official, as well as on official, sources for photographic identification. Nine photographs dated tentatively as taken in 1881 were 'bought in Dublin', while a number of others came from the Irish prison board. The south-west division of the R.I.C. supplied the photographs of a number of Cork suspects. The Home Office supplied a few photographs as did Jenkinson in Dublin. Chief Superintendent Adolphus Williamson of Scotland Yard supplied one of the photographs on file in Dublin at this time.²⁵ During the 1880s the police used photography more frequently and it became clear that they should have their

own photographic department.

4. Police photographic departments: prologue

From the earliest days of photography police forces and law enforcement officers in the widest sense of the term used photography. Once photographs were taken they could be used as a record of a scene, as an aid to investigation, or as evidence in court. Vagabonds, and possibly scenes of crime, were photographed in Switzerland as early as 1860. In 1867 the extensive damage caused by the fenians at Clerkenwell was photographed. The devastation caused by O'Donovan Rossa's London bombers on 15 March 1883 was photographed as was the damage done in 1892 at the detective office in Exchange Court, Dublin. The earliest civil case in which photography was used, an appeal to the House of Lords concerning a property dispute near Huddersfield, occurred in 1863.²⁶

In Ireland the use of photography to assist investigation and prosecution, other than portraits of convicts and suspects, began in 1868, when Thomas Flewitt, the deputy-governor and photographer in Kilmainham prison, supplied photographs of newspaper cartoons 'for the briefs at the commission'. Flewitt also photographed handwriting for the purpose of law enforcement.* Generally all such legal and investigative photography was done by prison photographers or professional photographers acting under instruction from senior government officials or a magistrate.²⁷

The availability of the new convenient dry-plates at the beginning of the 1880s probably encouraged some who would not have previously considered doing so to use photography for law enforcement. In the case in 1881 of a

* Above, ii, p. 7.

woman charged with murdering her husband, the magistrate before whom the case was heard directed the police to have photographs taken of the murdered man 'so as to be able to place in full view of the jury the several wounds he received'. In this case a professional photographer, Alexander Ayton of Derry, instructed by a sub-inspector of constabulary, supplied two sets of photographs for seven guineas, the account being settled in the usual way through crown solicitors.²⁸

In 1888 a man named Forhan had been murdered and the scene of the crime was photographed by the police.²⁹ This case and a more notorious and highly publicised murder case the following year may have concentrated the attention of senior government and police officers on the value of photography. This was the murder in Gweedore, Donegal, in 1889, of District Inspector William L. Martin, who had died in a scuffle outside Derrybeg chapel on 3 February. The trial did not begin until 18 October 1889 and in the intervening time the investigation continued.³⁰ One aspect of the preparation of the case was the photographing of the scene of the crime.

John Mackey, the sessional crown solicitor in Donegal, reported to Joseph West Ridgeway, the under secretary, that Acting-Sergeant G. A. Pratt had taken six photographic views at Gweedore of the parochial house, the chapel, and its grounds. Mackey 'went over the ground' with the acting-sergeant and directed him 'to take two or three more views' from points marked out by the solicitor. Mackey had no doubt that these would be 'very useful at the assizes' and sought approval 'to have a sufficient number of [them] prepared for trial' and a few enlarged. Copies came to the notice of Peter O'Brien, the attorney general, who led the

prosecution, and he probably used them in the preparation of the case. The cost of Pratt's work was £51, though some of this would have been travel expenses.³¹

5. The constabulary photographic department: early days

In 1890, senior government officials, perhaps prompted by the usefulness of photography in the Forhan and Martin cases, and shocked by the expense of photography when applied to occasional cases, decided to put police photography on an organised footing. Both police forces in Ireland had, of course, been using photographs in the course of their work for about thirty years; these had been supplied by the prison authorities. It was not until the spring of 1890 that the idea of the police having their own cameras and photographers was suggested. As will be seen both police forces considered adopting photography in March-April 1890 and it would appear that this was not a coincidence but originated from the highest levels of the executive in Dublin Castle.

Organising photography in the R.I.C. special-branch arose directly from a meeting on 28 March 1890 between the under secretary, West Ridgeway, and District Inspector Charles P. Crane, who was stationed in Waterford. Crane was directed 'to make experiments with a portable camera' in order to ascertain if photography would be of some assistance to the special-branch detectives. On the instructions of the under secretary, Crane purchased for four guineas a small camera known as the 'Luzo', in the long-established photographic firm of James Robinson & Sons, Grafton Street, Dublin. It was 5½" x 3½" x 3½" in size and was carried in a black leather case with a shoulder strap. Holes were pre-cut in the case allowing

the instrument to be used while in the case.³²

Crane was fully aware of the advantages of the instrument he had purchased. The camera, being small and in a black ever-ready case, it could be carried 'without attracting notice'. It took a roll of film with one hundred exposures which retailed at 10s. 6d.. The cost of the commercial development of the film, Crane suggested, was £1 and mounted prints could be provided at 6d. each. In reporting to Divisional Commissioner Owen Slacke, Crane suggested that if photography was to be useful to the special-branch police 'it would be better that they should know how to develop and print the photographs themselves'. He stressed in his report that while the quality of his results from the camera were, in his opinion, 'rather successful', under dull conditions it would nevertheless require practice and 'keeping careful notes' in order to produce good quality photographs. Crane, while not going into details, believed that there were 'many occasions' on which it would be both 'useful and interesting' to have photographs taken and he recommended that the inspector-general should consider supplying the 'Luzo' to the special-branch.³³

By 1892 the R.I.C. special-branch photographic department was well established. On constabulary property at the Depot, Phoenix Park, Dublin, a hut was set up for photographic purposes with Acting-Sergeant Murphy in charge as head master-photographer. The hut had been 'fitted up with an enlarging apparatus and necessary appliances for photography'. By October 1892 Murphy was making copies from photographs of suspects if the original negatives were unavailable. West Ridgeway found the standard of Murphy's work 'very creditable'. The sergeant was, in most cases,

producing copy photographs from photographs of suspects obtained and submitted by the regional divisional commissioners of the constabulary. When the photograph of an important suspect could not be obtained, the practice by October 1892 was to obtain a commercially produced group photograph and have a portrait of the suspect 'picked out and enlarged'.³⁴(plate 97).

6. Constabulary photography and evictions, 1890-1906

In 1890 the under secretary was advised by Deputy Inspector-General Henry Thynne of the R.I.C. that police officers in 'disturbed districts' believed that after evictions and public demonstrations 'the success of prosecutions or the vindication of the conduct of the police' might be impeded by conflicting evidence about the size and demeanour of the crowds that gathered. He suggested that the 'Luzo' would prove useful in such circumstances and supported Crane's suggestion that a number of small rollfilm cameras be purchased and supplied to each divisional commissioner. Thynne wished to be kept informed about progress in police photography.³⁵

Some photographs were taken at evictions on the Aran Islands in April 1894. Sixteen photographs in all were used in a report to Dublin. Charles E. A. Cameron, the divisional commissioner for the west of Ireland, felt that newspaper reports of the evictions were biased or untrue. Some newspapers described excessive force being used and also accused the police of being remiss in protecting tenants from injury. In his report Cameron sent annotated press cuttings supplemented by pasted-in photographs to the inspector-general. Using annotated newspaper cuttings as a means of reporting to superiors was a long established

practice. The use of photography in this way, however, was an innovation.³⁶ It seems that the photography on the Aran Islands was perhaps the only occasion when photography was used at an eviction by official photographers. The professional photographers, Lawrence's of Sackville Street, Dublin, photographed many evictions at this time and sold sets of photographs and lantern slides of such scenes.*

In 1905 the usefulness of photography at eviction scenes was examined again. A magistrate's report pointed out the advantages of crowd surveillance photography particularly in relation to eviction scenes. Captain Bernard Gossellin R.M. made a number of suggestions to do with the use of snapshot or instantaneous cameras at evictions. He suggested that a number of R.I.C. men should be trained in the use of hand-held cameras and 'when a riot or any collision between the populace and the constabulary' was expected, photographs should be taken to record the 'attitude of the mob'. He also made a number of other observations as to the value of photography in police work.³⁷

Gossellin believed that photographs could be used in evidence if civil or criminal proceedings followed a public disturbance. He said that if a 'crowd saw photographers busy' it would have a most quieting influence and he also saw photography as a protection for officials whose actions might be misrepresented later. It was normal for questions to be raised in parliament after disturbances and he felt that 'the answering of parliamentary questions which usually follow such disturbances would be simplified' by having photographic records.³⁸

Samuel Abraham Waters, the assistant inspector-general of the R.I.C., commenting on Gossellin's suggestions, gives

* Below, ii, pp 99, 100, 119.

some indication of the use of cameras in the 1890s at disturbances and evictions involving crowds. He reported that Gossellin's 'suggestion has been fully considered by us years ago' but that experience had shown that it is rare 'that in cases of anticipated riots etc. the photographer is able to take snapshots which prove of any value'.

Waters admitted that in the past in several cases in disturbed areas the constabulary had 'sent photographers to take snapshots of crowds etc.'. It seems that the number of times crowd activity was photographically recorded by the constabulary was small indeed, and perhaps was confined to only three cases. How thoroughly the question was 'fully considered' in the 1890s is not clear. In 1906 C. T. Beard, a clerk, elicited from the registry in the chief secretary's office that no papers 'about photographing disturbances' could be found.³⁹

7. The D.M.P. photographic department: early days

In 1890 West Ridgeway sought the views of the commissioner of police in Dublin, David Harrel, on how photography was being used by the police in London and elsewhere. Harrel had already been in touch with James Monroe, the commissioner of the metropolitan police, and had been informed that up to that time, April 1890, the police had not used photographic appliances. Harrel reported that he had therefore, in the absence of advice from other police forces, proceeded to experiment with a number of camera models. He strongly recommended Rouch's 'Eureka' camera for general police work believing it to be the 'best on the market'. It was portable, easily worked, and produced good results. This model would not be suitable for 'secret and detective' purposes he observed, adding that there was a

great risk of the subject 'being aware of what was going on'.⁴⁰

Harrel was convinced that the camera best suited to detective work was the 'button-hole' camera, a flat, slim camera, circular in shape, which could take six exposures on one plate. The camera was so designed as to fit conveniently behind a detective's waistcoat, supported at chest level by a strap around the user's neck. The very small lens projected through a button-hole in the coat or waistcoat. Though the camera design was of American origin, there was a European patentee at Berlin, C. P. Stirn, to whom Harrel had written for a prospectus. While the camera had limitations in that it could only be used in good light and the 'area of exposure [was] necessarily small' (the negatives were only two inches in diameter), Harrel was encouraged to seek information from Stirn as he had heard that continental police forces used photography and the button-hole cameras in particular.⁴¹

On 5 May 1890 in a confidential memorandum to Superintendent William Reddy of the detective 'G' division of the Dublin police, Harrel enquired whether any man in the division had 'any knowledge' or 'taste' for photography. Surprisingly, there was no one who had any knowledge of photography but Reddy quickly supplied the names of five constables whom he believed were 'most willing and anxious to learn the process and art of photography'. Following enquiries in two photographic firms in Dublin, Lawrence's and Chancellor's, it was agreed to send Constable W. McElhenny for instruction to Chancellor's of Lower Sackville Street. Perhaps seeing the possibility of developing further business with the police, Chancellor's quoted a reduced rate of five guineas to teach

McElhenny over a three week period. The police inspector who had originally called on Chancellor's to find out what the cost of lessons would be, also established that a 'smart man after three weeks practice would be quite competent to teach others the art of photography'. McElhenny began his training in photography at Chancellor's on 12 May 1890.⁴²

Early in 1890 an initial outlay of £10 on photography was authorised for the use of the Dublin police force with extra funds being allowed in 1892. The initial outlay obviously included the purchase of a camera and a second camera was sanctioned in February 1893. Further cameras were acquired in the early 1900s, 'for photographing suspects' in 1902, 'for detection purposes' in 1908, and 'a hand camera for crime special purposes' in 1917.⁴³

The Dublin police also established a photographic department and kept a register of suspects and, when possible, the descriptive particulars included a photograph. Clearly, a number of photographs of political suspects on Dublin police files were taken outdoors and unknown to the suspects as they went about their daily routine. Photographs of I.R.B. and G.A.A. members photographed by either concealed or compact cameras were on file by July 1892.⁴⁴ (plates 98, 99).

8. The police and crime department, Dublin Castle, 1892

Registers of suspects were brought up to date from time to time. One major revision began in July 1892. New biographies of suspects were entered, forty of whom were members of the Irish parliamentary party. The under secretary, West Ridgeway, continued the practice of having photographs accompany the biographies of those persons in

the register. Between July and the end of the year he insisted on building up his own office register of suspects drawn from the biographies and photographs available from the constabulary and the Dublin police. In October 1892, he requested that the acting-sergeant photographer at the Depot in Phoenix Park, 'put together a collection' of the most prominent suspects 'for this office' and requested Harrel, the Dublin police commissioner, to do likewise in respect of the 'Dublin suspects.'

The practice of keeping files on M.P.s, accompanied by photographs, continued. At the close of the year West Ridgeway was pleased with the state of the register and was particularly satisfied to hear that his officials 'had photographs of the majority of the M.P.s and some others'. Harrel supplied photographs and descriptions of the Dublin political suspects and included observations on the difficulties of police photography. In what would appear to be a clear reference to secret surveillance photography Harrel noted that 'without exception these photos have been taken under adverse circumstances'. While some photographs taken with detective cameras were a little unsharp, generally they were of good quality and would have been useful to the special-branch. Harrel also observed that the other major source of photographs of suspects, the group photograph, was difficult to acquire. 'Dublin men have avoided being photographed for many years past and it is impossible to obtain copies from groups or otherwise' he reported to the under secretary in late October 1892.⁴⁵

Nevertheless, the police and crime department at Dublin Castle had a number of large group photographs on file in 1892. It is likely that these photographs were acquired by the police from outside sources such as

newspaper offices. The occasions on which the photographs were taken ranged from the newsworthy to the uneventful: a wreath-laying ceremony at Glasnevin in Dublin on the occasion of the first anniversary of Parnell's death, a group of supporters seeing off John Redmond M.P. to America, and a number of groups of members of G.A.A. clubs. In these cases the photographs were mounted at the top of a foolscap sheet and the suspects were given a number on the photograph. Below the photograph the page was divided into four columns with headings for numbers, names, occupations, addresses, and remarks. In the case of the photograph captioned 'prominent Cork suspects seeing off John Redmond', sixty-four persons were numbered on the photograph with the details of fifty-seven suspects being recorded.⁴⁶

9. Photography in the north: a case of arson

An arson case at the Belfast assizes in 1891 reveals the standard of photographic skills of the R.I.C. in Belfast and gives an insight into the operation of the photographic section of the detective department in Belfast. The arson attack occurred in Carrickfergus and District Inspector Charles W. Leatham telegraphed the R.I.C. at Belfast requesting a Constable Elliott to take photographs of the scene. Elliott came and took thirteen views, - one exterior and twelve interior photographs. Though he was not new to photography, having photographed the previous year for police purposes, he did have some difficulty which necessitated the assistance of a professional photographer. Earl Seddall, the Belfast district-inspector, did not have much confidence in him and believed he was not 'a really experienced photographer'. It is likely that the dull

interiors of the house in which he photographed caused technical problems for him and the professional help which he received may have been advice about indoor exposures or practical assistance to ignite the magnesium lamp he was using. His superiors were satisfied with the finished photographs.⁴⁷ (plate 100).

The subsequent interest in the cost of these photographs revealed that Elliott was able, without breach of regulations, to make a profit through his official photography. Seddall reported that Elliott 'was employed altogether as a private individual' and could charge 15s. per photograph as was done 'in previous cases'. He felt that any profits being made should be devoted to the 'development of the photographic branch of the [detective] department' in Belfast. He went further and stated that 'in future cases I could not send a photographer unless he was paid something more than actual cost as we must make some money to keep this branch of the department going'.⁴⁸

By July 1891 J. J. Singleton, the divisional commissioner of constabulary in Belfast, supported Seddall's view that some small profit should be made in photography and noted that the photographic department had improved. 'We are now supplied with a proper camera etc.', he informed the inspector-general, and 'can supply photographs when required at a much lower rate than that charged by professionals'. The fundamental problems that the Carrickfergus photographs had revealed in the R.I.C., - inexperienced photographers, incomplete training in photography, and lack of funds, - were addressed at national level in the new year and as the decade progressed such teething problems disappeared.⁴⁹

10. Photography, murder, and desecration in Cork, 1894-5

How competent a constabulary photographer could be and how wide his range of techniques is shown by the application of photography to a murder case in Cork in 1894. James Donovan of Glenlara had been murdered during the night of 20-21 April. The police established to their satisfaction that a large number of persons were involved in the crime but had 'little or no evidence ... to point unerringly to the criminals'. A number of people admitted to seeing strangers about during the night of the crime. In addition to using all the standard procedures of crime investigation it was decided to use photography in a number of ways.⁵⁰

Constable Thomas R. West, the photographer at Union Quay, Cork, began his work by photographing Donovan's remains by then removed indoors. (plate 101). He also took an exterior view of Donovan's house and a close-up view of a blood spattered neighbour's door. A witness was discovered through police investigations and his house and the view he had from his house were also photographed. R.I.C. men were placed in these photographs to show the location of the witness at a window on the night in question and the location of the suspects he had seen crossing a near-by stream. Two further photographs were taken showing two R.I.C. men at a distance of twenty-two feet from the window where the witness stood. To assist the investigation, elements of importance in the photograph of Donovan's house were labelled alphabetically and notes and measurements entered on the photographic mount. Items of interest in the photograph of the house owned by the witness were similarly annotated and described.⁵¹

Robert B. Stokes, divisional commissioner of constabulary at Cork, believed that the topographical

photographs when used at the assizes would show the jury 'more clearly than could be done by explanation' the facility with which the witnesses could identify the accused. The photographer subsequently appeared in court, produced his photographs, and they were approved for use in the court proceedings.⁵²

Under instruction from his superiors West took more photographs to be used in the same case. Forty-five adults were photographed both at Glenlara and at Kanturk and Castleisland, Co. Kerry. Most subjects appear to have posed willingly for the photographer. Others were photographed as they went about their daily business. (plate 102). The police believed that Moonlighters might have been involved in the murder and they had them photographed. Stokes explained how valuable these portraits were. A 'large number of copies of the photos of the men suspected', he stated, were sent to the principal seaports so that the suspects could be intercepted should they attempt to leave the country. As the constabulary had evidence that 'strangers' had been seen in the neighbourhood it was decided that 'the quickest and most reliable way' of investigating the leading Moonlighters in the Newmarket, Kanturk, and Castleisland areas and their possible connection with the crime was to photograph them and show the photographs to those persons who had seen such strangers. Stokes was not only enthusiastic about photography in this case but felt it had unrealised potential: '... in this case it has proved to be our most useful ally', he stated, 'and the more its advantages are realised the more useful it will become in cases proper for its employment ...'.⁵³

Over a year later another case occurred in Stokes's

area, which he felt could best be described with the aid of photography. The family vault of the Colthurst family at Inishcarra was broken into and desecrated. A door bolt was damaged, iron bars were removed from a window, and mortar was damaged. Inside the vault, coffins were opened and bodies were removed to various parts of the vault. West, who had photographed in the Glenlara case, was sent to Inishcarra to photograph the scene. He took four exterior views on his quarter-plate camera but found that he had to use a large-format whole-plate camera to obtain the necessary detail inside the vault. Once again the device of annotating photographs with alphabetical letters and inscribing notes on the photographic mounts was used. In Stokes's view 'the photographs would show better than any verbal explanation the position of the coffins and the effect caused by the displacement of the bodies, as well as the damage done to the vault'.⁵⁴ (plate 103).

11. Photography and crowd behaviour, 1894

Besides the photographic surveillance of the Aran evictions, discussed above, two other instances of crowd surveillance did occur in the mid-1890s. Both surveys were done at street-preaching scenes. One series of five photographs was taken in Athlone by Sergeant John S. Doyle and was sent to Dublin by the western divisional commissioner of constabulary as a supplement to an earlier written report on the same subject. There was always the possibility of a breach of the peace at such meetings and the police naturally were present to keep order and ensure that the throughfare was not obstructed. David Harrel, formerly commissioner of police in Dublin, and under secretary since 1893, in passing the photographs to the

chief secretary for inspection (plate 104), observed that the crowd 'does not appear to be by any means large', and came to a decision, largely based on the evidence of the photo-sequence, 'to reduce the police-force henceforward'.⁵⁵

The most comprehensive photographic crowd surveillance sequence at this time was taken in Cork city from March to September 1894. The subject was again street-preaching scenes. The photographer was again Constable West from Union Quay and in that period he took a total of 117 photographs on eighteen separate occasions. All the meetings took place on Sunday afternoons and the photographic coverage for each afternoon involved at least three photographs. The highest number of photographs taken on one afternoon was 13 and a number of afternoons were surveyed by 8, 9, 10, and 11 photographs.⁵⁶

West was able to take photographs regularly every two or three minutes and, probably with the aid of an assistant, was able to record to the nearest minute when a particular photograph was taken. On 7 August 1894 West managed to take three photographs at one minute intervals to illustrate the fact that the police, having moved the crowd on because they were causing an obstruction, had to contend with a 'second attempt of the preachers to proceed with their meeting'. (plate 105). West used a hand camera and it would appear that, very occasionally, he may have come to the notice of curious on-lookers.⁵⁷

A number of legal issues arose as a result of the street-preaching and these were reported in the newspapers. The preachers claimed that the right of free speech was being impaired because they were frequently moved on by the police. The police for their part claimed that there were

obvious cases of street obstruction with large crowds gathered in the street. In clearing the streets of people the constabulary used mounted constables as well as constables on foot. One photograph in respect of a meeting on 15 April shows mounted police on Patrick's Bridge 'preventing [the] crowd from following preachers'. (plate 106). A photograph, taken at a meeting on 10 June is annotated: 'preachers proceeding to their hall ... protected by the police'. Some newspapers accused the constabulary of excessive force and also claimed that they were not protecting the preachers from hostile crowds. (plate 107). The police reports attempted to show by photography that they were giving adequate protection to the preachers.⁵⁸

A major issue, which arose between the preachers and the police, was that of street obstruction. The police believed that they were the best judges in the matter. Their reports to Dublin pointed to a photograph taken on 1 April on the South Mall; the photograph shows a large crowd blocking the thoroughfare yet the report continues that 'the preachers deny even causing or making an obstruction there'. The preachers also claimed that on 17 June they were 'moved on by the police when no obstruction exists'; the accompanying photograph clearly showed that there was an obstruction.⁵⁹

Occasionally the police reports, accompanied by photographs, take a more general approach, stating that the photographs 'cover the entire period of disorder and refute the exaggerated allegations in the press as to serious assaults etc. in the presence of the police', or, that 'these photographs represent the principal incidents which occurred on that date and show the untruthfulness and

exaggeration of the [newspaper] report of the matter'.⁶⁰

12. Police photography becomes routine

As the 1890s progressed the photographers of the R.I.C. showed the range of subjects they could handle: landscape views, portraits of suspects and witnesses, interiors of houses, scenes of crime, and murder victims. Constable Thomas McLoughlin was instructed in March 1895 to photograph the scene of a murder in the Cloneen district of south Tipperary. It was a particularly sordid affair. A man assisted by others had murdered his wife by torture because he believed she was a witch. McLoughlin recorded five photographs on his quarter-plate camera: an external view of the family house, three interior views, and a photograph of the site where the body had been buried.⁶¹

A wholly different subject was photographed in 1897 by the northern photographer, Sergeant Thomas Oakey. He photographed the city of Derry on the occasion of the visit of the duke and duchess of York in October. The set of sixteen photographs he assembled are an excellent record of a royal visit: triumphal arches displaying loyal sentiments, flags waving, banners, crowds, grenadiers, the royal visitors on the city walls, and journalists at work. (plate 108). Oakey also took two interiors in the guildhall; here he used time exposures of forty seconds duration, taken when the hall was empty, whereas all his other work on that day had been done by instantaneous or snapshot photography.⁶²

It appears that the photographic departments within the regional divisions of the constabulary settled down to doing routine photographic work. The photographic duties of Sergeant Charles M. Berry in 1898 suggest that

photography was being used regularly in police work. Berry worked in the detective department in Belfast and in a month he photographed five persons accused of larceny and a sixth person accused of house-breaking. He also copied ten photographs of licence holders and a photograph of one man accused of murder. The routine of his work was broken by going outdoors with his camera and securing a 'photographic snap-shot' of suspect Niall J. O'Boyle 'when going on board the Ardrossan steamer'.(plate 109). Otherwise a portion of each of his working days was occupied in 'developing negatives, printing from the negative, toning and finishing photographs for insertion in the album and for circulation'.⁶³

PHOTOGRAPHY AND NATURAL SCIENCE

1. Scientific uses, 1839-62

From the time of its announcement scientists saw the potential of photography as a recording and investigative tool. In 1843 Anna Atkins published Photographs of British algae: cyanotype impressions. This was the first book illustrated by photography to be published and arose from a suggestion made by Sir John Herschel the astronomer. In 1851 Talbot, the discoverer of the calotype, and the Astronomer Royal, G. B. Airy, discussed the possibility of photographing a total eclipse of the sun which would be visible in many parts of Europe on 28 July. About September 1850 Dr Hugh Welch Diamond, an English medical doctor, began to take portraits of insane patients in the Surrey County Asylum. These photographs were favourably received at the Society of Arts photographic exhibition in December 1852. They were also used to illustrate a series of articles written by John Connolly on aspects of mental illness.

In Ireland in the 1850s scientists and medical men became interested in photography. Robert Spenser D. Lyons, Michael Harry Stapleton, and James Foulis Duncan, were medical men who became members of the Dublin Photographic Society. They do not appear, however, to have used photography professionally at this time. In 1862 a medical doctor working in the convict prison service in Dublin, sought and obtained approval to have portraits taken of his patients, in order to assist in keeping medical records. The naturalists, John Scouler, professor of zoology, botany, and geology, at the Royal Dublin Society, and

William Edward Steele, were members of the D.P.S. Steele published A handbook of field botany in 1847 and a second edition in 1851. Both editions had a frontispiece of drawings illustrating many plants and ferns¹

On 7 February 1855 Gilbert Sanders, an amateur naturalist with a special interest in algae, told a meeting of the D.P.S. of his success in photographing specimens through the 'object glass of the microscope':

I also lay on the table for the inspection of the society, a few pictures and negatives taken by gas-light in one minute, using the object glass of the microscope for a lens. The photographs are greatly magnified pictures of the originals, which are barely visible without the aid of a magnifier: the ciliae surrounding the joints of some of the minute fronds are quite visible to the unassisted eye. I find no difficulty whatever with the microscopical pictures; I can get twenty of these in one evening, the greater portion of the time is taken up in arranging the specimen on the glass slide.²

Sanders was convinced that photography was important to the naturalist, in particular the naturalist who was working with perishable specimens:

To the naturalist who must seize every opportunity to get the very best and quickest drawings of his specimens, photography is a most valuable aid, and, perhaps, more so to the algologist than to any other. The perishable nature of his idols forbids him keeping them long in an undried state. Many algae commence decomposition within a very short time of removal from the sea; few will keep in perfection from afternoon till morning. The power of obtaining at night faithful microscopic pictures of the treasures we procure during the light of day will reveal to us facts heretofore passed over in the hasty examinations occasioned by the desire of doing as much work as possible before the plants decay.³

As the century progressed and as photographic materials became more sensitive through new discoveries, photography was applied to a number of branches of science. In Ireland the principal branches of science to which photography was applied in the nineteenth century were astronomy, medicine, geology, anthropology, and natural history.

2. Astronomical photography

The daguerreotype plate was capable of retaining fine detail but in the 1840s the exposures required in the 1840s were so long it was 'useless as an accessory to the telescope'. Nevertheless Rev. Thomas Knox of River Glebe, Toomavara, Co. Limerick, suggested, rather impractically, that nebulae be daguerreotyped through a telescope and that the plate be then examined under a microscope.⁴ It would seem that slow exposures and the relatively rough grain of paper used in the calotype process made it unsuitable for stellar analysis.

Some progress was made in the 1850s. After Scott Archer's collodion wet-plate process became available in 1851, prints of fine detail could be made from glass negatives, with exposure times that were only one-thirtieth of those previously required. The first recorded astronomical photograph taken in Britain is one of the total eclipse of 28 July 1851. Lord Rosse's early attempts at lunar photography in Ireland, which will be referred to below, took place about February 1854. The British Association met in Edinburgh in 1851 and Sir David Brewster drew the attention of astronomers to photography, for he could not 'omit calling your attention to the great improvements, I may call them discoveries, which have been recently made in photography'. In 1853 Warren De la Rue, a

manufacturing stationer, successfully took photographs of the moon. In February 1854, the first Irish astronomical photographs were taken. Lord Rosse at Birr Castle wrote to Talbot stating that he had 'recently made some attempts here to photograph the moon but with little success'. In 1854 more good photographs of the moon were taken at Liverpool and it was decided by the Royal Society to set up a photo-heliograph at Kew in order to make a daily record of the solar surface. On 6 May 1857 Thomas Grubb of Dublin delivered a paper on lunar photography to the D.P.S.. In 1858 the appearance of the comet Donati drew attention to the great weakness in astronomical photography at this time: the lack of a guiding mechanism attached to the telescope to keep the moving image fixed in the same place on the photographic plate while a long exposure was being made. In 1860 De la Rue brought to Spain a special telescope he had designed and used it to obtain a photograph of a solar eclipse and to photograph the flame-like protuberances of the sun.⁵

In the 1840s and 1850s Birr observatory was a centre of astronomical research. Lord Oxmantown, later the third earl of Rosse, had a deep interest in astronomy since 1827 and had constructed a telescope in 1839 with a mirror 3 feet in diameter. His part in encouraging Talbot to make the calotype available to amateurs and his interest in the Amateur Photographic Association are discussed above.* By April 1842 Oxmantown had cast a 72-inch mirror for a larger telescope. This new telescope, whose tube was 58 feet long, was mounted between two massive walls. It was ready for use in 1845. The 3-foot telescope had been in use since 1839 and through it star clusters, nebulae, and double stars 'stood out magnificently'. In 1844 Rosse

* Above, i, pp 56, 58, 81, 86, 100.

described observations 'on some of the nebulae' and his published paper included many reproductions of drawings. The sketches 'were originally made in the gallery of the telescope', working with 'very feeble lamp light'. This meant that often the observer would 'mark [the object] too strongly' on paper, and this in turn might convey 'that the well-marked confines of the nebula on paper really represented the boundaries of the object in space in all cases'. He was concerned with the accuracy of his drawings and insisted that in the case of one cluster 'everything in the sketch can be seen under moderately favourable conditions'. He was equally certain that because of variable viewing conditions from one night to another some sketches 'soon may require correction'. Sketches could be vouched for by co-workers: Rosse stated that an object, sketched by George Johnstone Stoney, had 'been accurately represented' and that in another instance he himself had seen and sketched the Orion nebula, whose dark cavity was 'discovered by Mr Johnstone Stoney when observing alone'. He had 'no doubt' that a sketch 'made with great care by my assistant Mr Johnstone Stoney' in April 1849 was very accurate. On a number of occasions in 1848 his records note a 'drawing confirmed' or a 'sketch confirmed'. (plate 110). One hundred years after Lord Rosse's death Sir Bernard Lovell wrote:

I have before me two illustrations of the nebula in Canes Venatici, a galaxy more than ten million light years in space. One is a drawing made by Lord Rosse as he saw it in the Birr telescope. The other, a photograph taken a century later by the 200-inch telescope on Mount Palomar. The identity of the two is dramatic and the spiral form of the galaxy is shown with far greater clarity in the drawing. It is to the everlasting credit of Lord Rosse that he discovered

the spiral structures of the nebulae, and thereby opened an avenue of exploration which today has led us into the inconceivable depths of space and time.⁶

In the 1850s the firm of Grubb of Rathmines, Dublin, had a reputation for constructing telescopes. Thomas Grubb, the proprietor, had a special interest in photography and was treasurer of the Dublin Photographic Society. In his paper on lunar photography read to the D.P.S. in 1857, which has been referred to above, Grubb stated that he was not impressed with the quality of lunar photography to date. His purpose was to give 'such hints' as might prove useful to 'those who are at once in a position and disposed to practise lunar photography'. He also wanted to dispel the idea given a few months earlier in The Journal of the Photographic Society, that none but first-rate instruments should be used. The greatest drawback to lunar photography, he said, was our atmosphere and climate: cloud, haze, and 'currents of air of different densities' passing between the object and the instrument were 'sadly against obtaining a good photograph'. Lunar photographers would have to seize upon 'the few and far-between moments of highly favourable atmosphere' in order to obtain a series of lunar photographs numbering perhaps as many as one hundred. Grubb believed 'every available portion' of the lunar surface should be photographed under the different lighting conditions of a rising or setting sun. He advised on how an equatorially-mounted telescope, driven by an adequate clockwork mechanism, was 'par excellence the thing to be desired'. Minor adjustments to the position of the photographic plate could be made, he said, by means of a 'screw connected with a small clockwork movement'. Lord Rosse used a similar device on his large

telescope which was not equatorially mounted; the photographic plate was moved to follow the moon while the telescope itself remained firmly clamped. Grubb's method produced sharp negatives which had too much contrast as between light and shade areas of the moon's surface. He speculated on whether one should use 'a peculiar collodion of low intensity for obtaining the best negatives'.⁷

At the time he read his paper Grubb would have been aware of a recent scientific expedition to Tenerife. The purpose of the expedition was mainly to carry out astronomical research at a location 'above the clouds'. Charles Piazzi Smyth, the Astronomer Royal at Edinburgh observatory, organised the expedition, which set sail from Cowes on 24 June 1856. There were 'essential astronomical tasks' to be done but a number of scientists and learned societies had supplementary proposals for research in physics, meteorology, geology, and botany. Many instruments had to be borrowed from friends and colleagues: George Gabriel Stokes, mathematician, physicist, and secretary of the Royal Society, loaned a quartz spectroscope. Smyth brought 'much photographic equipment' of his own intended for scenic as well as astronomical photographs. The expedition party camped at an elevated site, Guajara, where Smyth worked on observations of the sun and its spectrum. In the course of this work he recognised the 'very pronounced general improvement in the transparency of the atmosphere' and, at a higher station, Alta Vista, he found the improvements in the transparency of the atmosphere even more dramatic. At Alta Vista the definition of the images of stars was such that double stars, which were less than one second of arc apart, could easily be separated visually with a $7\frac{1}{4}$ " telescope. The

telescope images of planets were found to be magnificent. Smyth made very impressive detailed drawings of Jupiter and photographed the sun's surface but was 'not happy with his photographs' and he did not publish them.⁸

At the close of the 1860s the firm of Grubb's of Rathmines had expanded and had developed a good reputation for manufacturing observatory telescopes. Howard Grubb explained the photographic procedures to be followed on a large telescope which his firm was supplying to the Melbourne observatory. 'During its temporary erection' in Dublin the telescope had been used experimentally. Grubb considered the results of his celestial photography to be 'remarkable'. In order to take a photograph the tube of the telescope had to be lowered, a prepared photographic wet-plate was placed in the camera already fixed in position on the tube, the tube was then raised to the 'altitude of the moon', tremors were allowed to subside, and the exposure was made by a person on the ground controlling a flap shutter worked by a pair of strings. Focussing was done by rack-and-pinion movement by bringing a bright star into sharp focus on ground glass temporarily placed in the position of the photographic negative. The telescope movement in right ascension was governed by a driving clock which carried the telescope at sidereal rate. A gearing system allowed the telescope to move at mean lunar rate. Fine adjustments could be made to 'actual lunar rate pro tem'. One dozen plates could be exposed in an hour with the help of an assistant. Grubb claimed that his telescope was superior to Warren De la Rue's 'for photographic purposes'. In the Grubb telescope the image of the moon was nine times the area of that in De la Rue's and one-half times more brilliant.⁹

The discovery of the dry-plate process of photography initiated a new phase in astronomical photography. In 1883 in Britain Andrew A. Common reported to the Royal Astronomical Society on 'a photograph of the great nebula in Orion' and in 1884 spoke to the society on 'stellar photography'. About the same time, at Birr, a number of 'unsuccessful attempts' were made to photograph the great nebula in Orion but 'the result was not equivalent to Common's photograph'. Common believed that the 'gelatine dry-plate' would bring photography into 'extensive use' among astronomers 'if it does not entirely supersede the old method of eye observation'. He was aware that photographs had been taken by the wet-plate process in the past but that 'the results were not very good in comparison with the trouble that was required by the process'. He was fulsome in his praise of dry-plate photography applied to astronomy:

Its power to picture the stars in their proper relative positions and magnitudes in a way that is free from personal error, and under conditions that can be easily and certainly reproduced at any future time, renders the work done in this way so valuable in many investigations, that it is hardly possible to properly estimate it, while the much greater amount of work that can be done will render it still more valuable.¹⁰

Common believed that photographic work should be started with 'some plan that would allow a series of pictures to be taken of the whole heavens on as large a scale as it could be done on in a reasonable time'.¹¹

In the 1880s photography gradually became more important to the astronomer as a recording and analytical tool. It was used, though not very successfully, at Birr

observatory. In 1883 attempts were made at Birr to photograph the great nebula in Orion but the results were not good. Three times the exposure used successfully by Common failed to produce an 'equivalent' negative. In the mid-1880s work at Birr observatory included taking 'some photographs of the moon'. These were described as being of 'average good quality'. Photograph quality was apparently better than that of previous attempts because of the introduction of an 'electric control of the driving clock'. There were problems about photographing the great nebula in Orion as the speculum had to be tilted on its supports throughout a long exposure. It was clear to the astronomers at Birr in 1889 that photography would become an important recording and investigative tool and that their equipment would need to be adapted. However, they were not too hopeful:

... it is hoped that in a short time it may be possible to adapt the instruments so as more nearly to meet the requirements of this new branch of work.¹²

In February 1890 the report from Birr to the annual general meeting of the R.A.S. pointed out the reality of useful scientific astronomical photography taking place at the observatory:

Some desultory photographic work had been carried on at intervals but it becomes pretty clear that, without considerable modifications, our instruments cannot successfully compete with more modern instruments, though of smaller size, which have been specially designed for this new work, and the wonderful success obtained with the latter leads one to pause and ask, can the pencil of the draughtsman be any longer profitably employed upon nebulae as seen through the 6-foot when photography, to say the least, follows so closely on his heels.¹³

Celestial sketching, however, continued at Birr in the 1870s and 1880s. In 1874 Jupiter was frequently observed and 'careful coloured drawings made on many occasions' and in 1878 Mars was observed and fifteen drawings were made. A total of seventy-three drawings were made at Birr in 1881, the subjects being, Jupiter, Mars, Saturn, comets b 1881 and c 1881, lunar craters, and the central part of the Orion nebula. In 1889 a collection of drawings of Jupiter made by Dr Otto Boeddicker, the astronomer at Birr from 1880 to 1916, was published. In the twentieth century A. Stanley Williams examined these and found them to be very accurate in respect of the location of a 'large number of spots' on the planetary surface. Williams stated that to examine the drawings 'was almost like working from a collection of photographs of the planet'.¹⁴

Even in the second half of the 1880s Boeddicker made many astronomical sketches. By February 1887 it was reported that 'about eighty sketches of the planet Jupiter ... are awaiting publication'. At the same time Boeddicker was committed to observation of the Milky Way and the production of detailed drawings of it. This work was done between 1884 and 1889, the original drawings being shown to a meeting of the Royal Astronomical Society in November 1889. Boeddicker's work was published in 1892. A reviewer found the 'complexity of structure' to be 'very remarkable' in the published drawings. He pointed out that 'the features he delineates' would require confirmation 'by other observers' and he felt that the projection on which the stars were drawn involved 'considerable exaggeration'. Aware of a number of drawings of the Milky Way done by other workers, the reviewer was nevertheless prepared to state that 'Dr Boeddicker's work may be considered almost

the only detailed representation of the northern portion of the galaxy'. A modern assessment of this aspect of Boeddicker's work rated these drawings as a 'beautiful piece of work' but of 'no scientific value'. At the annual general meeting of the Royal Astronomical Society in 1893 at which the publication of Boeddicker's drawings was announced, the society also heard that 'the actual work of forming a [photographic] chart has practically commenced at several observatories' and that 'it might be hoped that the sky will soon have been covered by [photographic] plates' suitable for the formation of an illustrated catalogue.¹⁵

In 1887, three years after Common's suggestion, described above,* that the 'whole heavens' be photographed, astronomers decided to meet in Paris to organise such a scheme. Howard Grubb was determined that a great number and diversity of points would be thoroughly discussed before coming to any conclusion about the 'best instrumental equipment' to be used. The most important question Grubb wished to have discussed was whether a reflecting or refracting telescope should be chosen for use in the proposed survey of the heavens. He was aware that the Paris observatory and the observatory at the Cape used refractors while Isaac Roberts at Liverpool used a reflector. Grubb readily admitted 'that the refractors have done better work' than he had expected, but was 'by no means prepared to admit without further demonstration' that under 'equal conditions' they might be expected to do better than the reflectors. In his view Roberts' 'best specimens' appeared 'to compare very favourably' with those done by the reflectors. Grubb wanted the following matters discussed at Paris: optics, apertures, fields of view, the use of metal or glass mirrors, the size of instrument, and

* Above, ii, p. 40.

the form of equatorial mounting to be used. The clockwork drive should not be omitted from discussion; it was 'of course the most important of all the details of an equatorial intended to be devoted to stellar photography'. Grubb knew that astronomers were anxious to begin the survey but he advised caution:

It is no doubt highly desirable that the important work of mapping the heavens should be commenced with as little delay as possible but it would be equally regrettable if in the beginning a large amount were expended on instruments which proved after a little to be not the very best for the purpose.¹⁶

The International Astrographic Congress met in Paris on 16 April 1887. Fifty-six delegates attended. Thirteen European countries were represented. France and England also had representatives from Algiers, Australia, and the Cape Colony in their delegations. Delegates from America, Brazil, and the Argentine Republic also attended. It was unanimously agreed that a survey 'of the the heavens by photographic means' be undertaken. It was also agreed that this be done at selected stations and 'with instruments which should be identical in their essential parts'. The object was:

... to prepare a general photographic chart of the heavens for the present epoch, and to obtain data which will enable us to determine with the greatest possible accuracy the positions and the brightness of all the stars down to given magnitude (the magnitude being understood in a photographic sense to be defined) [and] to be able to utilise in the best way both at the present day and in the future, the data obtained by photographic means.¹⁷

A technical committee was appointed to consider and report on the form and size of the instruments to be used

and the least magnitude of stars which it was desirable to photograph on the plates. A number of British astronomers were on the committee: Andrew A. Common, David Gill, and Isaac Roberts, none of whom was Irish. It was unanimously agreed that the refractor-type telescope was the best form of instrument to be used and that the dimensions of the photographic equatorial at the Paris observatory were the most suitable. It was agreed also that stars be photographed to the fourteenth magnitude. The conference accepted these recommendations and added its own detailed recommendations that would ensure the standardization and quality of object-glasses, photographic plates, and the modus operandi of the astrographic survey. At the end of the congress it was clear that many countries were willing to participate in the survey and it was reported that 'the necessary instruments have been ordered for nearly all these observatories'.¹⁸

The permanent committee of the astrographic congress held its first meeting in September 1889 and allocated zones to participating observatories. The observatories at Oxford and Greenwich were two of nineteen participants in a world-wide scheme. Grubb's succeeded in supplying equipment to Greenwich and to three observatories in the southern hemisphere, at the Cape, Melbourne, and Sydney. By May 1889 Grubb's had already sent pilot lenses for experimental purposes to Greenwich to obtain information necessary for the construction of a 13-inch object-glass. Photographs were taken with Grubb lenses at Greenwich and later in Dublin with other lenses as part of the experimental work preparatory to construction. On 9 December 1889 and following days the Astronomer Royal, William H. M. Christie, visited Grubb's works in Dublin and

inspected the instruments being constructed for Greenwich. The photographic equatorial intended for use in the astrographic survey was received at Greenwich in March 1890. In February 1891 the instrument was reported as being 'completely mounted and ready for work'.¹⁹

Melbourne observatory had been given a 'share of the astrographic charting of the heavens' and it had 'a new building for the telescope' and a 'well-fitted photographic room'. In February 1890 it was reported that 'everything is ready for the reception of the telescope now being constructed by Sir Howard Grubb and which it is expected will arrive within a month or two'. Sydney observatory was also given a share and its staff were busy in 1889 preparing to start the survey. The mounting and clockwork drive were made in the colony but the object-glass was being made by Grubb's. It was expected to arrive in Sydney early in 1890 but in fact did not arrive until September. It was reported that, by November, Sydney observatory was 'ready for work'. At the Cape observatory 'the new photographic equatorial' made by Grubb's was erected in June 1890. It was found to have a 'slight optical imperfection' which Grubb's agreed to remove, but, otherwise, the 'general mechanical features of the instrument [were] excellent' and 'the clockwork and slow motions [left] nothing to be desired'.²⁰

Sir Robert Ball, the director at Dunsink from 1874 to 1892, and Astronomer Royal for Ireland from 1893, had been invited in 1888 to take part in the work planned by the astrographic congress. Ball had already 'pressed strongly' on the official visitors to Dunsink the advisability of having a 'photographic telescope and establishment fixed in the old dome'. In 1888 Isaac Roberts, a well-to-do amateur

astronomer from Liverpool, donated his 15-inch reflector telescope to Dunsink. Roberts had acquired a reputation for 'celestial photographs of outstanding quality' using a 20-inch silver-on-glass reflector of 100 inches focal length, made by Grubb's of Dublin. It was reported that the instrument presented to Dunsink would be used for 'parallax work by photography' and it was erected in May 1889.²¹ Time would reveal problems with the Roberts telescope and Dunsink did not participate in the astrographic survey.

Isaac Roberts came to Dublin in January 1889, probably at the invitation of Ball, and, while in Dublin, delivered a lecture on photography and celestial photography in particular. The lecture was given at the premises of the Photographic Society of Ireland in Nassau Street, Dublin. Sir Howard Grubb was president of the society and presumably offered its centrally located premises in Dublin with its lecture room and projection facilities to Ball for the occasion. There was a distinguished and knowledgeable audience which included Ball, Grubb, Sir Henry Langden, Arthur A. Rambaut, assistant to Ball at Dunsink, and Dr Wentworth Erck, an astronomer of independent means, who had a private observatory near Bray, County Wicklow. In 1882 his observatory had been used successfully to photograph the moon and both components of Mizar. George Johnstone Stoney, formerly an assistant at Birr observatory, and a former secretary to the Queen's University in Dublin, was also present. His work was known to the visiting lecturer as Stoney had worked with Grubb in the design and construction of a collimating eye-piece fitted in 1885 to Roberts's 18-inch cassegrain telescope.²²

Roberts explained that stellar photography was only

beginning. Equipment was costly and the specialised knowledge of astronomy was a prerequisite to useful work. The photographic plate, he said, might require three or four hours exposure while objects to be photographed 'would pass through a considerable arc'. Roberts showed 'several stellar photographs taken by himself', one containing 16,000 stars. He explained that 'not one' of these stars was visible to the naked eye and only some were visible through a powerful telescope. Roberts also showed photographs of the Dumbbell nebula, and of nebulae in the Pleiades and in Andromeda, 'that had never been seen till the photographs revealed them'.²³ Roberts believed that by

... diligent cultivation and the employment of fit instruments, guided by intelligence and exceptional patience and perseverance, a rich harvest of new knowledge will soon be gathered, knowledge attained that was beyond the dreams of science a few years ago.²⁴

In proposing the vote of thanks Ball stated that the photograph of the nebula in Andromeda 'was the most remarkable representation of celestial objects that had ever been reproduced' being taken through a movement of $2\frac{1}{2}^{\circ}$ of arc with parallax 'so small as to be insensible'.²⁵

By 1890 the Roberts telescope at Dunsink was proving troublesome. The clock drive suffered from 'excess friction', Grubb believing the clock 'to be a very poor one'. There were also 'peculiar periodic errors' that were difficult to trace. Roberts came to Dublin in August 1893 to see the reflector telescope he had donated. He and Grubb did not meet but the latter wrote to Roberts stating that he was 'still of the opinion expressed in my letter of 14th that under no circumstances can this instrument be

made to perform in any way comparable with the stellar photo telescopes which I have made for other observatories'. The Dunsink annual report to the Royal Astronomical Society in respect of 1894 stated:

Very little work has been done with the Roberts 15-inch photographic equatorial and that little consisted chiefly of visual observations for testing the performance of the clock. The difficulty of obtaining uniform motion, to which such frequent reference has been made, still, however, prevailed, notwithstanding some recent alterations; and all attempts at modification having failed, it was finally decided to replace the mounting by one of Sir Howard Grubb's latest patterns, designed specially for photography. This is now almost completed, and will be an exact replica of the mounting which carries the Greenwich 13-inch photographic instrument, up to the cross head of the declination axis.²⁶

The Roberts equatorial was in the Grubb workshops for a year and was finally re-erected in May 1895. The work of adjustment and experimentation took place on nights in May, June, and July, at the end of which month 'systematic photography became possible'.²⁷

The Roberts equatorial was then regularly used for astronomical photography from 1896 to beyond the turn of the century. In 1896 seventy-seven photographs were taken, the subjects including the great cluster in Perseus, the annular nebula in Lyra, and the great nebulae in Andromeda and Orion. A number of stars were photographed: α Cassiopeiae, α Ursae Majoris, and ϵ Lyrae. Comet b 1896 was also photographed on a number of nights in April and May. An exposure of ten minutes was given on each occasion with the movement of the instrument adjusted to sidereal rate. The astronomer at Dunsink, Arthur A. Rambaut, published his analysis of the photographic plates of the

comet. In 1898, forty-eight photographs were taken of star clusters, nebulae, the moon, and eclipses of the moon. In the photographs of an eclipse 'a good deal of detail all over the image' was reported. In 1900, Charles Jaspar Joly, who had become director of Dunsink in December 1897, accompanied an expedition to Spain to observe an eclipse, and 'obtained photographs of the corona with a 4-inch lens of 20-foot focus'.²⁸

A number of other Irish astronomers had experience of or experimented with astronomical photography. Dr Ralph Copeland, assistant astronomer at Dunsink, travelled to Mauritius in 1874, to observe the transit of Venus. A few hundred photographs were taken on this expedition led by Lord Lindsay of Dun Echt, Aberdeen, and Copeland, as an officially appointed assistant, would have gained valuable experience of this branch of astronomical photography. In April and May 1882, Charles E. Burton of Loughlinstown, County Dublin, experimented with lunar photography. Some of this work, about which he published a note in 1882, was done with 'the kindly accorded permission of Dr Wentworth Erck' who made available his 7½" Alvan Clark equatorial telescope. Colonel Edward H. Cooper, whose observatory was at Markree in Sligo, reported that, in 1882, 'some time was also spent in gaining experience in photography'. It was his intention with the aid of new equipment already ordered, that sunspots and other phenomena be photographed. In 1883, the astronomers at Armagh reported that they hoped 'probably to try cluster photography with the reflector'.²⁹

The most outstanding of the smaller, amateur observatories in Ireland working on astronomical photography at the end of the century was that at Daramona, Streete, Co. Westmeath. Its owner and director was W. E.

Wilson.(plate 111). The first observatory at Daramona was provided with a 12-inch reflecting telescope in 1871 by Grubb. A small room was attached to the observatory and 'could be used for photography'. Sometime in the 1870s 'a few photographs of the moon' were taken on wet-plates. In 1881 Wilson had a new large observatory built using 'a 24-inch silver-on-glass mirror of 10 foot 6 inch focus'. A decade later this was set on a heavier mounting and provided with Grubb's 'best form of driving clock and electrical control'. A photographic darkroom 'for the development of the astronomical plates' was attached to the observatory. Following the remounting of the 24-inch mirror the observatory was 'almost entirely used for photographing star clusters and nebulae'.³⁰

In the autumn of 1893 the Dumbbell nebula was photographed with a two-hour exposure and the negative sent to Dunsink to have the positions of stars in the nebula measured. This nebula was photographed again in August 1894 with a one-hour exposure. Further clusters were photographed in the following years: cluster M37 Aurigae (1895), the great nebula in Orion (1897), and spiral nebula M33 Trianguli (1898).(plates 112, 113). Wilson also photographed sunspot activity and photographed the moon. In 1895 the R.A.S. 'decided upon the publication of copies of photographs in their possession'. Prints and lantern slides would be available to students of astronomy. By 1898 the society listed sixty-six photographs, copies of which could be had at inexpensive prices. Six of these were taken by Wilson. He was an innovator and early in 1897 ordered 'a special form of cinematograph' to analyse sunspot activity. It was used in 1898 with photographs being taken 'at the rate of 100 exposures in the hour on a

roll of film'. This was continued for four hours and showed 'the feasibility of the method' of analysis. In 1902 Wilson photographed a region in the sky in which experts believed there was an ultra-Neptunian planet. Wilson's method of investigation was to carefully compare a set of 1902 photographs with a set taken in 1901.³¹

3. Medical photography

In Ireland in the 1860s photography was used by some medical doctors. The services of anatomical artists were still regularly used. A number of artists had a reputation among medical men for making accurate drawings of a patient's condition. In 1861 Richard G. H. Butcher reported that the appearance of one of his patients had been 'accurately depicted' in a lithographed figure 'from a truthful picture drawn by Connolly'. Later that year John K. Barton, a surgeon at the Adelaide Hospital, Dublin, illustrated an article he wrote on the treatment of severe burns by using a 'lithograph taken from an excellent drawing by Connolly'. Later in the decade, at a meeting of the Dublin Pathological Society, a drawing by Connolly was reported as giving 'a very accurate representation of the locality and of the appearance' of a growth on a patient. An artist named Burnside did pre-surgery drawings of a neck tumour and a scrotum for Henry Gray Croly, a surgeon at the City of Dublin Hospital. He also did a post-surgery drawing of a damaged eye and eye socket for William Stokes. Another artist also did work for Croly. He was usually referred to as 'Herr Tomsohn' and was an employee of Forster & Co. of Crow Street, Dublin. In 1867 Tomsohn 'took a sketch' of a patient who had a large tumour on the face and jaw. This was done before and after surgery.

Occasionally drawings of patients would be 'made by Mr Foster'(sic), the proprietor at Crow Street. Surgeon Francis Rynd spoke of him as 'the eminent anatomical draughtsman, Mr W[illiam] Foster'(sic).³²

Medical photographs began to be taken in the 1860s. In 1860 Butcher amputated a leg from a railway guard and recorded the appearance of the stump by means of photography. 'I had a photograph taken of the man by a talented young friend' he reported. It would seem that the photographer was not a professional and the taking of medical photographs was not done routinely. The following year, however, Barton recalled a patient, on whom he had operated for the treatment of burns, for the purpose of photography. The patient had come from the country 'at my request, to have a photograph taken' he stated. Medical doctors began to use photography more frequently from the mid-1860s. John Hughes of the Mater Hospital in Dublin treated a case of morbus adisonii in a patient, in which 'discolouration pervades the whole surface of the body'. Hughes was so struck by the 'remarkable discolouration of the skin' that he 'had him photographed on the instant'.(plate 114). The photographic firms of Lawrence, Robinson, and Forster, all in Dublin, and of Marcus Ward of Belfast, began to take medical photographs at the request of surgeons. In 1866 Maurice Henry Collis, surgeon at the Meath Hospital, Dublin, reported a case of a patient who had been admitted in March 1865. Collis was impressed with the photographic work of Forster's:

In [the plates] there is a faithful delineation of the appearances in this case before and after the operation. The drawings are from photographs by Forster of Westmoreland Street, who has on many occasions assisted me signally in preserving records

of my cases in this necessarily accurate manner.³³

The work of other photographers was also respected. E. D. Mapother commented on 'the faithful photographs of Mr Auguste Lesage' of Sackville Street and Butcher referred to a 'fine photograph' by Robinson and 'the admirable photographs of Mr Robinson' of Grafton Street, Dublin.³⁴

The usual method of medical illustration at this time was to have drawings made of a patient's condition. These were commissioned by the surgeon or physician. If required for book illustration the drawing was redrawn as a woodcut or drawn on stone for printing by lithography. In 1863, for example, Collis of the Meath Hospital dealt with a case of melanosis, in which the original drawings from life were by Connolly but the woodcuts were by Mrs Caroline Millard. (plate 115). At the same time, Butcher of Mercer's Hospital had drawings done by Connolly and reproduced by lithography done by Forster's of Crow Street. One of their employees, Tomsohn, already referred to, did medical drawings from 1863 to about 1880, when he then appears to have gone into partnership and traded as Tomsohn & Wogan, 56 William Street, Dublin. The artist Burnside also did similar work for Joseph Lewis, lithographers, Dame Street, Dublin. In 1869 Francis R. Cruise of the Mater Hospital, Dublin, illustrated an article in a journal with the engravings of William and Alfred Oldham of Dublin. John Falconer, lithographer, Upper Sackville Street, Dublin, lithographed a Burnside drawing in 1872 and worked 'from a photo' in 1873. Some of this work was of a high standard as a reviewer pointed out who examined Collis's book on cancer:

Not content with word pictures, however, Mr Collis

illustrates his descriptions with woodcuts and coloured plates, drawn from nature, with the well-known faithfulness of Connolly, transferred to wood by Oldham, and to stone by Lewis, under the author's own superintendance. These have been executed in Dublin and the beauty and accuracy of their drawing and finish are worthy of the highest commendation. Oldham is so well-known to our readers that we need say nothing of his woodcuts; but, as it is the first time we have met a medical work with coloured illustrations by Lewis, we wish to call especial attention to the manner in which these are done. Nothing could exceed them for accuracy and perfection of colouring and finish.³⁵

While drawings continued to be used as a basis for published illustrations in medical journals photographs were also regularly used for this purpose. The following surgeons, for example, used one or more photographs to assist illustrating published articles: William Stokes (1873, 1876, 1883, 1895); A. W. Foot (1875); Edward Stamer O'Grady (1875, 1878); W. I. Wheeler (1880, 1884); L. Hepenstall Ormsby (1885); R. L. Swan (1880) and Edward H. Bennett (1883). Both Falconer's and Forster's had a share of this, book illustration by lithography based on original photographs. In 1893 Henry O'Neill of Belfast Royal Hospital used eight photographs to illustrate articles on the removal of growths from the face and neck. The photographs had been taken in 1891 and 1892 as O'Neill worked on the cases. The significance of the illustrations was that the photographs used were reproduced by the half-tone block process developed in the 1880s and based on the inking of an etched copper or zinc plate mounted on a block of wood. The finished published illustrations in O'Neill's article were successful.³⁶ (plate 116).

An early application of photography to surgery is seen in the experience of Henry J. Croly as he familiarised

himself with an amputation procedure known as 'Teale's amputation by long and short rectangular flaps'. Croly described how he had learned a method of leg amputation from Thomas P. Teale of Leeds infirmary. He had gone to Leeds in 1860 and had the method explained to him by the originator. Croly was also shown 'stumps of patients operated on' by Teale and was presented with Teale's book in which one patient in particular 'was beautifully photographed'. Croly practised the method in Dublin 'on the dead subject' on a number of occasions and performed surgery by Teale's amputation on four patients in 1863, 1864, and 1865. He had drawings made of the stumps in the first two cases but had 'photographs and casts' made of the stumps in the two cases operated on in 1865. In two letters to Teale he 'enclosed copies of the photographs'. In both cases Teale adjudged the stumps, based on the evidence of the photographs, to be 'excellent'. Teale informed Croly that he would give directions for one of the photographs to be 'placed in the photographic album of our new school of medicine' in Leeds.³⁷ (plate 117).

Surgeons realized the value of photographs in conveying the success of surgery on a patient. Mary Jane Waterson of Belfast, aged ten, was admitted to hospital in May 1866. William MacCormac examined her hand which had been injured in a spinning frame. He found 'three fifths of it in a shocking condition'. He determined to save a 'portion of the mutilated hand'. When the young girl had fully recovered from surgery MacCormac had her photographed 'in the act of knitting, which she does with rapidity and ease'. (plate 118). The following year a boy aged twelve was admitted into the care of Croly at the City of Dublin Hospital. He had a diseased elbow-joint and his general

health was not good. Croly excised the elbow-joint and when the patient had recovered and built up his strength, he had him photographed holding a cricket bat, with the arm well flexed.(plate 119). In 1877 William Stokes also used this technique to illustrate the success of surgery. He had a photograph taken of 'the patient engaged in sweeping a floor, one of the duties she had to discharge as wardmaid'. In 1876, O'Grady illustrated an article on leg amputation and the after-use of an artificial limb. Four lithographs based on photographs by Robinson's of Grafton Street were used and showed the following: 'the appearance of the stump after complete recovery', front and rear views of the patient demonstrating the 'principle of construction and mode of application' of the artificial limb, and the patient in a sitting position, 'selected by the young man himself', from which he could rise 'with fair facility'.(plate 120). Photography was used in connection with certain types of case, for example, burns and tumours on the neck and face (1861 and 1867), hare lip and cleft palate (1877), and bow-legs in young children (1885) In these cases photographs were taken before and after surgery in the belief that reliable pictures would show success more graphically than the written word.³⁸

Medical doctors were aware of the limitations of photography as a means of illustration. In his article, 'The aesthetic treatment of hare-lip with a description of a new operation for more scientific remedy of this deformity', Collis used drawings by one of the Oldham brothers. While he was clear that the best method of illustrating the stages by which a surgeon should proceed in the treatment of hare-lip was the use of annotated line drawings produced from wood-cuts (plate 121), he was

equally convinced that the use of a pasted-in photograph in the same article was the best way of illustrating the effect and success of his surgery:

The result after a month is well shown in the photograph. I especially call attention to the depth of the lip from the prolabium or margin; also to the curved outline of the cicatrix and to the good form of the nostril. The photograph was taken when the scar was still new, and the mark of the cicatrix is much plainer than when the boy left hospital for his home. This is of set purpose, as I wished the line of the cicatrix to be perceptible. Had I waited another month to take the photograph, there would have been no trace of it, and though the result would have been perfect as a picture, it would not have so well served the purpose I had in view, of rendering my mode of operation intelligible.³⁹ (plate 122).

There were two reasons why photography was not suitable for illustrating surgical procedure. The wet-plate process was slow and cumbersome, instantaneous indoor photography adaptable to the operating theatre not being available until the end of the century. Also, photography, even if sufficiently advanced, would have been impractical in an operating theatre in which a surgeon, mindful of blood loss, had to work quickly with patients who were not well anaesthetised. In 1875 B. Wills Richardson of the Adelaide Hospital also used drawings to illustrate his mode of procedure in hare-lip surgery, using thirteen drawings in a published article. In 1899 J. S. McArdle used seven detailed drawings, in an article entitled 'The operative treatment of hernia', in order to assist his written description of how to proceed. Where a manipulative skill was required, as in the reduction of a dislocation, James E. Kelly of the Ledwich School, had clear drawings printed from woodcuts to show the positions of patient and surgeon

and the procedures to be followed.⁴⁰

Occasionally book reviewers in Irish journals tried to encourage the use of photographs by surgeons. In the early 1870s the work of Balmano Squire of the British Hospital for Diseases of the Skin was favourably reviewed in The Dublin Quarterly Journal of Medical Science. Squire already had a reputation for using 'coloured photographs of skin diseases' and began in 1872 to issue a new series of photographs 'in quarto' to be issued every three months. The first photograph in the new series was of a 'spontaneous oval keloid'. The reviewer hoped that Squire would continue to publish 'his illustrations which being photographic are necessarily accurate in outline'. If the monochrome photographs were 'carefully coloured' the reviewer would consider them to be 'aids in the diagnosis of rare forms of disease'. Early in 1874 three further 'photographic representations of cutaneous diseases' were published by Squire. These were 'an admirable series of faithful pictures of some remarkable forms of diseases of the skin' and the reviewer wished to 'cordially recommend' the photographs to his readers. He recommended that 'all who are engaged in the special study or clinical teaching of cutaneous diseases will find these illustrations a most useful adjunct'.⁴¹

There were some difficulties experienced in photographing patients. In the mid-1860s Werner's of Leinster Street, Dublin, photographed a patient suffering from morbus addisonii, briefly mentioned above.* As discolouration covered the 'whole surface of the body', the surgeon who had charge of the case, John Hughes, decided that a photograph should be taken and coloured to convey the 'smoky appearance' and 'shades of deep amber' of the

* Above, ii, p. 53.

patient. The idea worked, except that the patient was reluctant either to be photographed or to take off his clothes for the camera:

The accompanying portrait is a most faithful likeness of my patient and gives a perfect representation of the skin. The photograph was made and painted from life by Mons. [Louis] Werner, 15 Leinster Street, and lithographed with singular fidelity and skill by Mr H. McConnell. Our patient, as may be seen from the likeness, was not a little puzzled at his novel position, and being somewhat reluctant to submit to the photographic process, we were compelled to have him taken without much exposure of the surface; but some of the parts best marked are uncovered.⁴²

Edward Stamer O'Grady reported that a patient suffering from a tumour in 1869 was 'too nervous to be brought to the gallery to have a photograph taken'. He reported another difficulty in respect of a man, admitted to hospital in 1874: 'owing to the constrained position as the man lay for the photograph' the peculiar shape of a tumour 'did not come out'. A. W. Foot of the Meath Hospital had photographs taken of 'a remarkable case of obesity' in a young boy. Six photographs were eventually 'taken in the Meath Hospital' under difficult circumstances:

In order to have his photograph taken an attempt was made to carry him, sitting in a chair, to the photographic room, but he could not be got to sit up, and he was carried down, slung in a sheet, by six students, and laid on a sofa, when the operation of photographing him was effected, though imperfectly, owing to the difficulty, of getting him into the proper positions.⁴³ (plate 123).

In 1878 O'Grady reported that it proved impossible to photograph a seven month old infant whom he was treating for 'deformed union sequent to fractures of the leg'.

'Owing to the restlessness of the little creature', O'Grady reported, 'no photograph could be obtained representing its condition before the operation'.⁴⁴

Surgeons seem to have been pleased with photography as a means of recording the condition of patients before and after surgery, but nevertheless, in 1880 W. I. Wheeler of the City of Dublin Hospital, in treating a case of hare-lip, stated in criticism of both photography and lithography:

Notwithstanding the accuracy of plate 1, taken from a photograph, it does not at all portray the immense improvement there was in the child's countenance, before, inert and stupid, after the operation, expressive and intelligent.⁴⁵

In another case, reported in 1880, but probably treated in the late 1870s, Wheeler observed a 'slight notch' on a child patient's face in a lithographed plate accompanying an article he had written. 'Such did not exist', Wheeler wrote, 'it is only an appearance due to the pursing of the child's mouth when the picture was taken'.⁴⁶

In the 1860s and 1870s photographs of patients were included in letters between surgeons and between patient and surgeon. An Edinburgh surgeon reported in The Dublin Quarterly Journal of Medical Science that a Manchester doctor had written to him enclosing 'three photographic portraits exhibiting a tumour from different points of view' and requesting a medical opinion as to the 'possibility of removing it'. Henry Gray Croly of Dublin corresponded with Thomas P. Teale of Leeds in 1866 and included photographs to show success in surgery. Edward Stamer O'Grady received a post-operation photograph of a patient from Dr M. J. Barry. The patient had a tumour

removed from the groin by O'Grady and on the patient's return to the country Barry sent a photograph taken at Thurles, Co. Tipperary. The patient was described as 'quite well' and O'Grady was grateful for the photograph.⁴⁷

Patients occasionally sent post-surgery photographs to their surgeons as a token of gratitude for a successful operation. W. I. Wheeler received a photograph from the mother of an infant who was operated on for hare-lip. Richard G. Butcher was presented with a number of photographs by a grateful patient whose elbow joint had been successfully excised. The photographs, taken by Chancellor's of Sackville Street, Dublin, showed 'the healthy and well nourished condition of the man' with 'the arm flexed' and 'the forearm and hand pronated'. The patient gave 'full permission to publish' the photographs. In 1875, Butcher received a letter and a photograph from a patient whose elbow-joint he had excised in 1859. The man, M. Reynolds, wrote from Paris mentioning that he had left Dublin and had moved to London and eventually to Paris:

... for the last seven years I have been in this fair city. You made such a good cure of me that during the dreadful siege of Paris, sooner than act the coward and run away, I joined the Foreign Legion and took up arms in the defence of the city. I took part in the two days fighting at the Plateau d'Avron, and several other minor engagements; remained here during the Commune, and thank God, escaped all. I am and always have been in the enjoyment of excellent health, with perfect use of my arm.⁴⁸

Reynolds enclosed in his letter to Butcher a photograph of himself taken by Courtmioux of Paris.⁴⁹

By the close of the 1880s photography was being used in medicine in new ways. Alexander Fraser was an early worker in the application of photography to anatomical and

embryological research. He was a Scot who had been appointed in 1883 to the chair of anatomy in the Royal College of Surgeons in Ireland.⁵⁰ In 1889 he spoke to the zoological section of the British Association about the application of photography to his work. He was aware that 'all morphologists' would agree that the labour involved in illustrating their work was great and that any aid that would lessen this would be welcomed. He had not found the camera lucida adequate 'to illustrate in a reasonable time all the work which lay on my hands'. The answer, Fraser said, was to adopt the 'photographic method'. He had set himself two objectives:

The first was to reproduce the entire structure of the several divisions of the body, life-size; while the object of the second was to produce enlargements of my serial histological and embryological sections for purposes of reconstruction.⁵¹

Fraser used a 'very large apparatus, arranged to work vertically' with a rapid rectilinear lens of long focus. This gave him a 'proper working distance to reproduce natural size' the many divisions of the body he had prepared. For his second objective, Fraser explained, he had an enlarger with a short focus lens, illuminated by an oxyhydrogen light. He had special carriers made to hold twelve or more slides in the enlarger to speed up the process of exposure in the darkroom. He was able to work efficiently by 'pushing the carrier along the breadth of a slide', making an exposure, 'changing the sensitive paper', and then moving on to the next slide. This procedure, together with exposures of four seconds, would have allowed Fraser to go through the complete exposure procedure for one image in about ten seconds. With many serial sections

under one cover glass he found it was often possible to enlarge 'one hundred' sections in a few minutes. Fraser was convinced of the usefulness of photography in his work and recommended it to medical researchers and teachers:

The ease and celerity with which this can be done and the beauty of the enlargements, have to be seen to be appreciated, whilst the everyday aid that the method can yield, both in teaching and original work, will soon lead to its more general adoption.⁵²

In the 1890s X-ray photography became available to surgeons and others, Röntgen having announced his discovery in 1895. It was to prove useful in treating cases of bone dislocation. It was then possible to ascertain by means of X-rays the position of bones before treatment and to assess the condition of a reduced joint subsequent to treatment. In 1897 J. S. McArdle treated a woman patient who, seven months earlier, had 'sustained a dislocation of the elbow-joint'. She had been treated by another doctor by 'many violent efforts at reduction' and her 'bones were supposed to have gone into place'. Investigation by McArdle, including the use of X-ray photography, showed that the earlier treatment was unsuccessful. McArdle operated on the elbow-joint and was able to show by published X-ray photographs that his surgery was successful. In 1898 X-ray investigation showed that an arm dislocation in a boy, despite treatment by another surgeon, 'was unreduced'. After treatment the parts of the arm were to be seen 'in accurate position' in a published X-ray photograph. (plates 124, 125). McArdle believed X-ray photography would prove very useful to some surgeons and would 'prove of great value in judging of the proper time for allowing movement after operations on bone'.⁵³

About 1896, Dr A. Francis Dixon did work on human embryos. He photographed the embryos for teaching purposes. He made lantern slides from negatives and used these to illustrate a talk he gave to the anatomy and physiology section of the Royal Academy of Medicine in Ireland. A series of slides shown by Dixon illustrated 'an unopened chorionic sac measuring 8 mm. x 7 mm. x 3 mm., the probable age of which was estimated at fourteen days'. Dixon showed a 'second series of slides' of embryos about twenty-two days old. In yet a third series of an embryo, thirty-three days old in this instance, the photographs showed 'not only the external markings on the embryo itself' but also a 'good view of the allantoic and vitelline arteries'. Questioned on how the photographs were taken Dixon replied:

In photographing, the specimens were placed in glass cells with dark bottoms, the cells were completely filled with spirits, and the cover slid on, so as to exclude all air bubbles. Special care had to be taken with the lighting.⁵⁴

When Alexander Fraser died 'early and unexpected' in 1909, his work was left unfinished. Sir Bertram C. A. Windle, president of Queen's College, Cork, was apprehensive that 'his unpublished work must perish with him'. Sir Thornby Stoker, writing in the British Medical Journal hoped that Fraser's material was in such a state that it 'may be preserved and utilised for the science to which his life was devoted'. Windle had been very impressed by Fraser's photographic work and recalled:

He showed me on one occasion vast sheaves of most exquisite photographs taken by himself and relating chiefly to points in embryology. These he had hoped

to publish one day ... I earnestly hope that some means will be found of giving these to the scientific world, for it would be a thousand pities, if they were lost forever.

Though Fraser was committed to the application of photography to his work he continued to use traditional methods of illustration at lectures. He had 'a facility with which he illustrated his lecture on systematic anatomy by drawings on the blackboard'. His students would think of him

... surrounded by his class in college, arrayed in his long dissecting coat, its front bedaubed by many coloured chalks, and which seemed an integral part of himself.⁵⁵

4. Geological photography

The idea of taking geological photographs in the British Isles in a systematic way was first proposed by Osmund W. Jeffs at a meeting of the geology section of the British Association at Bath in 1888. A committee of the geology section then proposed that 'a committee should be appointed to collect and register such photographs'. This new committee, the geological photographs committee, was sanctioned at Newcastle in 1889. At Newcastle the report of the corresponding societies' committee discussed the original proposal; it had a special interest in this as the assistance of field clubs and similar groups at local level was seen as essential if the proposal was to be successful. The corresponding societies' committee discussed the proposal to have a 'systematic collection and registration of photographs' made, and was aware of the existence of the geological photographs committee which would 'arrange for the collection, preservation, and systematic registration

of photographs of geological interest in the United Kingdom'. While the corresponding societies' committee made suggestions as to how to proceed in order 'to carry out the objects stated', the details were left in the hands of the geological photographs committee. This committee had seven members. It was chaired by James Geikie, its secretary was Osmund Jeffs, and it included one Irishman, William Gray of Belfast, an experienced photographer and a pioneer of the Belfast Naturalists Field Club.⁵⁶

In 1889-90 the geological photographs committee issued a circular inviting the cooperation of geological societies, field clubs, photographers, and others that might be interested in the objectives of the committee. The committee wished to have information from these societies on the subject matter of photographs already available locally and the names of societies or persons who might wish to help further the objects of the committee. It was also believed that in this way 'particulars of new localities, sections, boulders, or other features' worthy of being photographed would come to the notice of the committee. The committee also included a 'circular of instructions' which gave directions as to the type of subject matter that should be included in the photographs, and the fact that photographs 'should be taken under skilled geological direction'. It was recommended that photographs should be whole-plate in size if possible. An official form was to be included with each photograph giving details such as name and location of subject, height and length of rock section shown, and compass direction. Information was to be supplied on any 'special features shown' in the photograph.⁵⁷

By 1890 the association had received 275 photographs.

A total of 42 had been sent from Ireland. Many English, Scottish, and Irish counties remained unrepresented in the collection. The committee was grateful to a number of societies in Britain 'for the care they had taken to preserve photographic records of important and interesting sections'. The Belfast Naturalists Field Club was mentioned in this connection. William Swanston, a member of the society, had two photographs accepted for registration. William Gray sent twenty photographs on behalf of the Belfast Naturalists Field Club. All of these had been taken by Robert J. Welch, whose geological and ethnological photographs will be discussed in this chapter and whose antiquarian work has been discussed above.* W. Stelfox of Belfast had ten photographs registered and William Gray had nine photographs registered in his own name. E. Tate of Belfast had one photograph accepted and Professor James Geikie had made selections of Giant's Causeway views taken by George Washington Wilson & Co. of Aberdeen. Geikie's selections were listed but not given a registration number. The majority of Irish photographs were views of basalt taken in County Antrim. A few photographs were taken in County Down and one each in Louth and Fermanagh. There were no submissions for the rest of Ireland.⁵⁸

In 1891 at the British Association meeting at Cardiff it was reported that Dr Valentine Ball had joined the geological photographs committee. He was an experienced geologist who had worked in India for ten years and had returned to Dublin to succeed Samuel Haughton as professor of geology in the University of Dublin. When he was appointed to the geological photographs committee he was director of the Science and Art Museum, Dublin. William W.

* Below, ii, pp 70-71, 82-4; above, i, pp 174-5.

Watts also became a new member of the committee around the time he was appointed a geologist and petrologist in the Geological Survey of Ireland. Watts, then living in Ireland, supplied whole-plate photographs of Shropshire and enlargements from quarter-plates of views taken in Wales, a total of seventeen prints. Four of his Shropshire photographs had been taken in 1886. Fifty-one photographs of geological sites in Ireland were registered in 1891, with nearly half the total coming from two English photographers, W. H. F. Alexander of Bolton, and Tempest Anderson of York. The remaining twenty-eight photographs were supplied by Mary K. Andrews of Belfast. Most photographs were taken in Co. Antrim, four in Co. Down, and one each in counties Armagh and Londonderry.⁵⁹

At the British Association meeting at Ipswich in 1895 the geological photographs committee offered guidelines to 'those who have not yet adopted any particular camera'. A shortened version of the committee's recommendations was prepared by four 'referees' among whom was William Gray of Belfast. It was agreed that the best camera for geological work was 'that to which the worker is most accustomed'. However, should the photographer not have made a choice already, then the first qualities to be considered in a camera were lightness and rigidity. It was essential that the camera would have a 'double swing-back and rising and falling front' to allow for adjustments that would correctly render perspective, lines, and curves. It should be possible, the committee recommended, to be able to extend the camera to permit the use of lenses of different focal length. The lenses recommended were, a rapid rectilinear doublet of 10 to 12 inch focus suitable for half-plate size, a wide-angle meniscus lens of 6 to 7 inch

focal length 'for interiors of quarries and craters', and a long-focus lens for photographing 'distant hills and inaccessible cliffs'. If only one lens was available it was to be about 9 inches in focal length for half-plate work. It was agreed that 'good general work' could be done on a quarter-plate camera, followed by enlarging on to bromide paper. The committee recommended that a 'scale object' should be included in the photograph and specifically excluded the use of a hammer, which was regarded as being 'not suitable'.⁶⁰

In the 1890s the most prolific photographer of geological sites in Ireland was undoubtedly Robert J. Welch of Belfast. He was a professional photographer who had set up business in 1883, having worked for E. T. Church, photographers, Donegall Place, Belfast. Welch had a keen interest in zoology and geology. When the announcement was made by the British Association that it was setting up a collection of geological photographs Welch responded quickly in 1889-90 and had twenty photographs accepted for registration. (plates 126, 127, 128). In 1893-4 Welch again contributed photographs to the association, on this occasion twenty-nine photographs, which included photographs taken in Antrim, Donegal, Down, Fermanagh, and Galway. In 1894 Welch published a catalogue of Geological Irish Views. There were 118 views listed and prices ranged from 9d. to 1s. 6d.. His geological photographs appeared in journals and in books in the 1890s and well into the twentieth century. William W. Watts used six Welch photographs in his book, Geology for beginners, published in 1898, and Grenville A. Cole's book, Open air studies: an introduction to geology out of doors, published in 1895, used nine Welch photographs, seven of which were full-page

illustrations. In the early 1900s the Geological Survey of Ireland used Welch's photographs in their geological memoirs of Belfast, Cork, and Dublin.⁶¹

The amateur photographer who made an outstanding contribution to geological photography in Ireland in the 1890s was Mary K. Andrews. She was the youngest daughter of Dr Thomas Andrews of Belfast, a scholar who had read almost thirty papers to the Belfast Natural History and Philosophical Society. Mary Andrews was a scholar in her own right who had read a number of papers to the society. She developed an interest in geology and this manifested itself in the 1890s in photographing geological sites. Andrews's geological photography first came to public notice in 1891 when she contributed thirty-one photographs to the British Association collection. Three of these were of sites in Somerset and Wiltshire, the remainder being of sites in northern Ireland. The following year five photographs taken by Andrews in Dorsetshire and eighteen photographs taken in northern Ireland were accepted by the British Association. Almost all finished photographs were half-plate in size, some being enlargements, presumably from quarter-plate negatives. Andrews also submitted a 10" x 6" panorama view of a quarry at Scrabo Hill, Co. Down. In 1893 she corresponded with William Watts in Dublin who was interested in assembling a collection of Irish geological photographs. She was instrumental in providing Watts with copies of photographs from northern photographers and sent 'many of [her] own for selection' and the work of James Stelfox, Robert Welch, William Swanston, and Anne Tate.⁶²

Geologists in Dublin and the south of Ireland were also active in geological photography. Grenville A. J.

Cole had been appointed professor of geology in the Royal College of Science for Ireland in 1890. He was interested in photography and promoted its use in geology in a number of ways. He collaborated with Welch in writing the geological descriptions to the photographs in Welch's catalogue published in 1894. The following year Cole published a book on geology, and, while the bulk of illustrations were drawings, he used seventeen photographs. Two of these were taken by his father, J. J. Cole, many of whose photographs had been accepted for registration by the British Association. Cole actually attributed his interest in 'out of doors' studies to his father's photographs:

It is especially pleasant to me to include two plates from my father's series of geological photographs which formed perhaps my earliest introduction to the study of out of doors.⁶³

In his book Cole used nine photographs by Welch and one taken by Professor H. J. Johnston-Lavis. Cole also used one photograph supplied by the director of the U.S. Geological Survey.⁶⁴

By the mid-1890s it was clear that photographers in the south of Ireland had not matched the enthusiasm of northern photographers in taking geological photographs. In 1894, the year before he died, Valentine Ball, produced a series of eleven photographs of Howth, Co. Dublin. Some south of Ireland sites had been photographed by English photographers: W. H. F. Alexander of Bolton photographed in Clare and Cork in 1890, and H. L. P. Lowe had photographed in Galway by 1894.⁶⁵ Cole drew attention to the lack of commitment in the south:

Very little had been done in the way of recording the features of our wilder landscapes, or indeed of any district remote from Kingstown Pier or the esplanade at Bray.⁶⁶

William Watts re-echoed Cole's words in a contemporary issue of Geological Magazine. Watts recognised that excellent photographic work had been done in the north of Ireland but was aware that:

such districts as the Wicklow mountains, the beautiful tract of Limerick, the areas of ancient rocks in Galway and Mayo, and the old red sandstone rocks of Kerry, are all literally, awaiting development.⁶⁷

Cole, mentioning his own efforts at assembling 'a fairly complete series of the Balrothery esker, and of the folded strata at Loughshinny', called on the readers of The Irish Naturalist and the members of the Dublin Naturalists Field Club in particular to join him in a photographic survey which would ultimately provide a 'permanent series of prints' and possibly a set of lantern slides 'for exhibition at the winter meetings'.⁶⁸

By the mid-1890s the Geological Survey of Ireland used cameras routinely in survey work. In 1895 William Johnson Sollas, professor of geology and mineralogy at the University of Dublin, acting in the capacity of temporary assistant geologist in the Geological Survey, was instructed to photograph 'some of the cuttings on the new Galway railway'. He was to be advised as to the best sites by a geologist on the staff, Alexander McHenry. Sollas later reported at the end of the year that he and McHenry had photographed 'geological structures and features in Galway'.⁶⁹

By the end of the decade photography had become more

important in geological survey work. Alterations to the Geological Survey's premises in Hume Street, Dublin, were required. A 'lead-lined trough' with waste outlet and a water pipe 'with rose top opening over trough' were required for 'photographic work in connection with the survey'. The darkroom was to be better ventilated and its door 'made light proof with red baize'. Gas taps were to be fitted, one of which was to provide for a 'ruby lamp'. Extra shelving was also required 'at convenient heights' and a small wooden light-tight cabinet 'for keeping photo plates'.⁷⁰

5. Photography and ethnology

Taking photographs to convey ethnological information seems to have begun in the second half of the 1850s. In 1856 Lord Canning initiated a photographic survey in India 'from an ethnological point of view'. It was completed in the early 1860s and published in 1868 in an eight volume work entitled The People of India. In the 1850s ethnologists relied on drawings to visually record buildings and people. In 1857 the ethnological section of the British Association, whose annual meeting in Dublin has been referred to earlier in connection with a photographic exhibition and the production of a museum catalogue, held an excursion to the Aran Islands in Galway.* Among those present were three Irish persons who had a serious interest in photography at this time: Francis W. Brady, James Foulis Duncan, and Rev. Charles Graves. They may not have used cameras on the islands. A number of artists were active there including George Petrie and Frederick W. Burton. At 'St Breacan's group of churches' Burton made a 'beautiful drawing of the inscription' which confirmed George Petrie's

* Above. i. pp 68, 142-3.

copy of the same subject taken at an earlier date. Burton had also visited the islands on an earlier occasion and 'exquisitely portrayed the living generation of the islands'. William R. Wilde noted that the ruins of several cloghauns were 'very much dilapidated' since his earlier visit but fortunately he possessed a 'drawing of the most remarkable' of them. In 1865 photographs were taken of ogham on a cromlech in Co. Meath and a few years later J. H. Lamprey gave Eugene Alfred Conwell advice 'on how to make photographs from stone surface injured by lichens or old age'. At the end of the 1860s Conwell was still receiving and sending drawings and rubbings.⁷¹

In 1874 the British Association published a small pocket book, Notes and queries on anthropology for 'the use of travellers, ethnologists, and other anthropological observers'. The purpose of the book was to assist those interested in collecting information on the physical types, manners, and customs of places visited. The book expressed the hope that data would be recorded without bias and photography was one of the investigative techniques recommended. In 1877 the anthropometric committee of the British Association heard a proposal from E. W. Bradbrook 'for carrying out the provisions of the vote of the association in relation to typical photographs' of the people of the British Empire and a pamphlet was published 'for the use of the committee'. When the British Association met at Dublin the following year it was agreed that 'in the first instance' the inquiry by means of photographs should be limited to 'the national or local types of races prevailing in different parts of the United Kingdom'.⁷²

In Dublin the photographic sub-committee of the

anthropometric committee suggested that photographs be taken in a 'number of districts' in which it was believed 'a distinct type prevails'. The sub-committee recommended that as many competent observers as possible should each obtain six to ten photographs representative of 'individuals belonging to families long settled and intermarrying in the district'. From this material the sub-committee hoped to select 'representative specimens'. The sub-committee sought the assistance of professional photographers and amateurs of good education such as medical men and clergymen. A hundred members of the British Association were circularized and a letter seeking assistance was published in The Photographic News. The sub-committee required that only adults be photographed, that the parents and grand-parents of the subject selected should have belonged to the same district, and that notes, including details about eye and hair colour, should accompany the photographs.⁷³

At the Dublin meeting of the photographic sub-committee 'an excellent selection of 5 male and 5 female inhabitants' of Aberystwyth was provided as specimens of the way the photographs should be done. James Park Harrison of Surrey had 'made a selection' of types from Wales and Cornwall. No photographs of Irish physical types seem to have been provided at this time and it was reported that 'collectors for Ireland are much wanted'. Further progress was reported at the British Association meeting in 1879 and an album was compiled of photographs of typical inhabitants of the British Isles and shown at Sheffield. By 1880, 12,000 observations of human height, weight, chest-girth, and hair and eye colour, had been recorded and about 400 photographs had been received by the committee.

The committee was dissatisfied with the photographic aspect of the work:

Owing to the funds at the disposal of the committee being required for the reduction of the mass of observations that have been acquired, no other original photographs have been taken this year under their direction. Few consequently of those that have been obtained are of value for strict scientific examination; and by far the greater part of England and Scotland, and the whole of Ireland, the Channel Islands, and the Isle of Man, are unrepresented at present by any photographs.⁷⁴

The anthropometric committee last met in 1881 in which year it was reported that 'a collection of Irish types [was] made by [James] Park Harrison'.⁷⁵

In 1881 a new British Association committee was 'appointed for the purpose of obtaining photographs of the typical races in the British Isles'. It took over the photographic collection, and, in 1882, in its first report, stated that the 'photographic portraits already collected' would assist 'in determining the values of [physical] crosses in different parts of the country'. The committee believed that its work could contribute to discussion on 'more than one social question' and also believed that 'a clear definition of racial features' would 'allay national animosities springing from a belief in the preponderance of some one race'. It was hoped that its work, aided by photography, would provide a sound basis for generalizations and so avoid deductions based on 'doubtful traditions and insufficient data'. The committee stated that 'a correct description of the main racial types' would give an opportunity of testing the truth of views held on the subject of 'racial tendencies and proclivities'.

Finally the committee believed that by learning how best to

describe features and physical 'profiles of human beings' it would be possible to describe more exactly criminals and deserters. By 1883 the committee's purpose was described as being to define 'the facial characteristics of the races and principal crosses in the British Isles and [to obtain] illustrative photographs'. In 1884 the committee set itself a related but new task: it became interested in 'the earlier inhabitants of the United Kingdom' and decided to 'examine carefully all the osteological remains preserved in different museums'. From now until the end of the decade little anthropological and ethnological work seems to have been done by British Association members. ⁷⁶

In 1891 Daniel J. Cunningham and Alfred Cort Haddon began setting up an anthropometric laboratory in Dublin which would ensure that man's 'physical endowments can be ascertained and their gradual development watched'. Haddon had come to Dublin from Cambridge and held an appointment as professor of zoology in the Royal College of Science for twenty years though he moved with his family to Cambridge in 1893, staying in Dublin for the period of his lectures only. He was not satisfied with research opportunities in Dublin and he longed to do fieldwork in places like Ascension, the West Indies, or Torres Straits. His first visit to Torres Straits, in 1888, was a turning point in his life. He went out as a marine biologist and returned as an anthropologist. Cunningham was professor of anatomy at the University of Dublin. At the time of their writing in 1891 the work had not actually begun but the 'authorities of Trinity College' Dublin were interested in the project and had 'sanctioned the use of one wing of the handsome museum of comparative anatomy' for laboratory purposes. Cunningham and Haddon also wished to 'unravel

the tangled skein of the so-called "Irish Race" and it was their intention to take 'excursions during the long vacation into the country, and with our apparatus, pitch our tent in different districts until at last we or our successors shall have traversed the entire extent of Ireland'. The Royal Irish Academy granted a sum of money to a committee composed of Cunningham, Haddon, and Dr Samuel Haughton 'for the purchase of instruments' to be used in the work. The formal opening of the anthropometric laboratory was set for 25 June 1891.⁷⁷

Haddon seems to have set to work quickly on the peripatetic aspect of his research, and, in December 1892, in collaboration with Charles R. Browne, a medical doctor and a member of the R.I.A., read a paper to the R.I.A. on the ethnology of the Aran Islands. They had used a camera in their work in accordance with the guidelines subsequently published in the first report of the ethnographical survey committee:

A considerable number of photographs were obtained of the people [in Aran]. In some cases groups were taken, but full face and side view portraits were secured of thirteen of the subjects we measured.⁷⁸ (plate 129).

The islanders do not seem to have resisted photography and the authors found that 'the promise of a copy of their photograph' was 'usually' a sufficient payment for any inconvenience caused by being measured and photographed. Browne and Haddon were probably competent to use cameras at this time. Later in the decade Browne worked on local ethnological surveys in Ireland on which new cameras, supplied by Curtis Bros., Suffolk St., Dublin, were used: a 'Trinity' hand camera on the Mullet survey and a 'Trinity'

half-plate size camera and tripod first used on the Ballycroy survey.⁷⁹

In 1893 a committee of the British Association reported that it would conduct an 'ethnographical survey of the United Kingdom'. From the start it was intended to have an Irish sub-committee, composed of the following: Charles R. Browne, Cunningham, and Haddon. Haddon, who had worked with Cunningham, was appointed secretary of the sub-committee. The survey would examine 'certain typical villages, parishes, places, and their vicinity' which appeared to the committee 'to deserve ethnographic study'. It was proposed to record 'the physical types of the inhabitants, current traditions and beliefs, peculiarities of dialect, monuments and other remains of ancient culture, and historical evidence as to continuity of race'. It was the committee's intention that while the 'physical types of the inhabitants' was being investigated 'physical measurements, with photographs' should be obtained. Guidance was offered as to the types of photograph required. The ethnographic survey required that 'at least twelve more or less beardless male adults and twelve female adults should be photographed'. Both the left side of the face and full face portraits were to be taken. A few other portraits could be taken which would 'best convey the peculiar characteristics of the race'; this type of portrait was to be accompanied by appropriate notes.⁸⁰

Haddon's interest in applying photography to social anthropology had begun in the late 1880s, probably after his expedition to Torres Straits. It was to continue well into the twentieth century. On the expedition he worked twelve hours a day at biology but in the evenings he listened to folk-tales and accounts of the past from the

natives. He also collected skulls and a wide range of artifacts: masks, tobacco pipes, ornaments, clubs, bows, and arrows. He took photographs on the survey. When he returned to Dublin he organized a scheme for the ethnological survey of Ireland. Academically he was working on the borderline between the two branches of science in which he was interested: anthropology and zoology. Photographs were taken on the Aran Islands survey in which he collaborated with Browne.⁸¹

In 1898 Haddon went again to Torres Straits and on this occasion he led the expedition, now acknowledged to be the 'first anthropological investigation directed and carried out by scientists'. W. H. R. Rivers, a psychologist, agreed to come and so did Rivers's two best students, C. S. Myers and W. McDougall. A linguist, S. H. Ray, and a medical man, C. G. Seligman, were also part of the expedition. Anthony Wilkin joined the expedition as a photographer. Haddon himself also photographed extensively on the Torres Straits expedition and while delayed at Sarawak on his way to Borneo he photographed 'some hundred Sea Dayak fabrics'. Later, he listed much of this work, 260 photographs taken by himself in the Borneo-Sarawak region and 625 photographs taken by himself and Wilkin in New Guinea. Haddon offered advice as to how future anthropological expeditions should be organized and saw an important role for 'photographers and typists' in assisting scientists in the field. In 1914 he combined a visit to Australia with anthropological work in Papua, 'taking his daughter Kathleen with him as assistant and photographer'. The attic in his home, Inisfail, in Cambridge, was converted into a darkroom where he made lantern slides to illustrate his lectures.⁸²

The outstanding professional ethnological photographer in Ireland in the late nineteenth century was Robert J. Welch of Belfast. He was a scholarly amateur naturalist who had published a series of geological views in 1894. About this time he had also taken photographs of 'Irish country life', which he described as 'a complete series of country life incidents, vehicles, curachs (sic), & c.'. He sought Haddon's assistance in providing ethnological printed matter to accompany these photographs at a Belfast Naturalists Field Club conversazione on 1 November 1893. An ethnography committee had existed in the Belfast Naturalists Field Club from 1892-3, and Welch was a member. By 1894 he was reported as having made 'a most valuable series of photographs illustrative of the ethnography of Ireland, especially of Ulster'. He was advised by Haddon to publish a 'list of Irish ethnog[raphical] views'. Haddon offered to write an introduction, and Welch, while sending Haddon 'a rough idea in manuscript', placed himself in Haddon's hands 'entirely' and insisted on adopting Haddon's classification of the photographs. Welch corresponded with Haddon between 1893 and 1896 supplying him with photographs, slides, and ethnological objects. In January 1894 Welch came to Dublin to see Haddon and to give him two calico-covered miniature currachs, made by William Moore, Trabeg, Rosapenna, Co. Donegal. Later in the year Welch acquired for Haddon four kippens or sticks from Sligo, used to keep a salmon net open. He also obtained a 'Galway spade' for Haddon. At the close of 1895 Welch encouraged Haddon to apply to the Great Northern Railway company at Amiens Street, Dublin, for photographs of 'various places & c. on their system'. The company was 'anxious to know of lecturers of good standing who could

utilize slides' in public lectures. Welch believed, as the railway officials did, that photographs and slides used by Haddon at lectures in Cambridge and London, and at the British Association meetings, would be a 'tourist advt.' for the area covered by the G.N.R. system. Welch advised Haddon to apply for 'thirty to forty' slides to illustrate lectures and thirty platinum prints for the new ethnology museum in Cambridge. Haddon received these. Welch continued to advise Haddon to apply to other railway companies for photographs of ethnological and antiquarian subjects within their areas.⁸³ (plates 130, 131, 132, 133).

In the 1890s Charles R. Browne, a member with Haddon of the Irish subcommittee of the British Association, who had cooperated with Haddon on the Aran Islands survey, discussed above,* did a number of local ethnological surveys in Ireland. The areas covered were: Inishbofin and Inishark, Co. Galway (1893); the Mullet, Inishkea Islands, and Portacloy, Co. Mayo (1894); Ballycroy, Co. Mayo (1895); Clare Island and Inishturk, Co. Mayo (1897); Garumna and Lettermullen, Co. Galway (1898); Carna and Mweenish, Co. Galway (1900). Photography was employed on all these surveys but there were some difficulties. On the Inishbofin and Inishark survey 'the people [had] a strong dislike to having their portraits taken'. Browne's brother, J. M. Browne, accompanied him 'to do the necessary photography', and, despite 'strong winds prevailing during [their] stay' a considerable number of groups, single portraits, in full face and in profile, and views 'illustrative of the modes of life and environment of the people', were obtained. Photographs were also taken of a quern, a spinning wheel, and 'a method of washing clothes'. (plate 134). On the Mullet survey both Browne

* Above. ii. pp 79-80.

brothers used cameras although there were difficulties with 'cloudy skies and high winds'. When the 'high winds would not allow the setting up of a tripod stand' a hand camera was used instead. Over sixty photographs were taken, including 17 portraits, 12 groups, 30 illustrations of occupations, modes of transport, habitations, antiquities, and a set of topographical and coastal views. In the ethnological survey of Ballycroy, photography was used by Charles R. Browne in the same way and covered similar subjects. On the Carna and Mweenish survey Browne 'was greatly aided by Mr T. J. Westropp' and received from him 'the greatest help in every branch of the work, and more especially the photographic and archaeological departments'.⁸⁴(plate 135).

There were some difficulties encountered in photography on the local ethnological surveys. Recording people at their occupations 'when the performers were in motion' was a problem. There was also a difficulty with persons who did not wish to be photographed. A 'new appliance' was bought for use on the Mullet survey, a 'Trinity' hand camera made by Curtis Bros., Suffolk Street, Dublin, to attempt to deal with these problems. It cost £5. 5s.. The new camera stood up to 'rather rough treatment' and 'very satisfactory work' was done with it. It was also used on the Ballycroy surveys on which it was reported as continuing 'to do well'. Browne had a good regard for this camera in ethnological work:

The value of a hand camera for field work, as an aid to, or substitute for the heavier and more slow tripod stand-camera can hardly be overrated, as it can be employed for taking the portraits of persons who cannot be induced to get photographed by the other instruments, and it can also be used on very rough

ground or in high winds where the other camera could not be kept steady; for objects in motion and local customs or occupations, it is invaluable.⁸⁵

6. Photography and naturalists, c. 1880-1904

From the 1880s naturalists seem to have become more active in using photography on their rambles. In late 1888 or early 1889 the Belfast Naturalists Field Club heard a lecture on 'Photography as an aid to the club's work'. The talk seems to have been mainly concerned with 'securing records of our geological and archaeological features'. The Ulster Amateur Photographic Society assisted the lecturer with over one hundred 'geology and natural history slides'. J. Donaldson, a member of the Ulster Amateur Photographic Society specialized in plant photography, his 'Narcissus' being 'one of the most successful flower studies' ever seen by one exhibition reviewer. In June 1889, members of the Photographic Society of Ireland were invited to join an excursion of the Dublin Field Club. Greenwood Pim, a member of the P.S.I., described a method by which flowers, seaweeds, mosses, and ferns could be copied on to photographic paper by using a printing frame. The finished product was an outline image of the plant, with some detail, surrounded by a dark background. Any other small flat objects could also be copied on to glass to provide lantern slides. There were technical difficulties about taking action photographs of birds but these seem to have been overcome once reasonably sensitive dry-plates were marketed in the early 1880s. In 1881 action photographs of gannets were taken in Canada. The first British photographer to take a photograph of birds in flight was Benjamin Wyles of Southport and in the following

year, 1889, Robert J. Welch took a photograph of a nest with eggs of the lesser black-backed gull. In 1893 J. M. Gillies showed a set of lantern slides on bee-keeping to the members of the P.S.I.⁸⁶

In 1890 the authorities in the natural history department in the British Museum in South Kensington ordered 'a large number of the animal studies from life ... to be framed and hung in the galleries.' This was reported as being 'one of the first instances on record' of photography being used in this way and showed 'that photography is slowly, but surely, making its way upward in the scientific world'. Plants were photographed in the early 1890s in the Botanic Gardens, Glasnevin, Dublin. Valentine Ball, the director of the Science and Art Museum, Dublin, and formerly professor of geology and mineralogy in the University of Dublin, whose use of photography in museum work and geology has been discussed,* had an orchid photographed in Glasnevin in 1890. The following year Frederick William Moore, the keeper at Glasnevin, directed that two plants in the gardens be photographed. Some years later G. T. Plunkett, who became director of the Science and Art Museum in 1895 in succession to Ball, required 'a set of large photos of trees in their winter and summer state, taken from the same spot ... in March and in June'. McGoogan, the photographer at the museum, was to consult Thomas Johnson, professor of botany in the Royal College of Science in Dublin, before doing the work. Natural history drawings however were still required in the 1890s. In 1898 Robert F. Scharf, keeper of the natural history division in the Science and Art Museum, employed Miss H. M. Pike 'to make drawings in the natural history museum at an hourly rate'. She was to draw 'such Irish species of which we do

* Above. i. pp 174-5; above, ii, p. 72.

not possess specimens' for the collection of Irish animals. Nevertheless the trend was towards a greater use of photography. In 1903 Lord Annesley published a book, Beautiful and rare trees and plants, illustrated by his own photographs taken at Castlewellan.⁸⁷ (plates 136, 137, 138).

In the 1880s and 1890s a number of Irish naturalists used cameras outside Ireland. Greenwood Pim was a mycologist who visited continental Europe on a number of occasions including: North Italy (1882), Switzerland (1885), and the Dolomites (1888). Pim showed an 'album containing nearly 50 views taken in [Switzerland] during his trip, many of which were very good, especially some of those of snow and glaciers'. He was aware that the Dolomites would be interesting to the geologist, but he seems to have photographed here as a landscape photographer.⁸⁸

John Joly, a geologist and engineer who produced a form of colour photography in the 1890s, photographed in the Swiss Alps in 1889 and 1891. In 1889 Joly overcame the problem of photographing contrasting subjects made up of bright skies and snow-clad landscapes on the one hand and darker foregrounds on the other. He developed such plates by the recommended 'partial' method of P. H. Emerson and Captain William de W. Abney. This method involved developing the highlights of the image with a weak developer and then stopping development. The details of the darker areas were then developed by painting on a stronger developer in those areas and, when a correct density was achieved, the negative was washed in water. Seventy-two slides, made from negatives processed in this way, were shown at Joly's lecture in March 1890. They were 'in every respect excellent'. In the summer of 1891 in

Switzerland, Joly also made photographic copies of 'freshly gathered flowers' by printing them out in contact with photographic paper in a printing frame.⁸⁹

William Spotswood Green was a naturalist whose best work was done on the fishes and invertebrates of the Atlantic. He also loved adventure and began alpine climbing in 1869. This was followed the next year by another expedition to Switzerland. He gained further climbing experience in Norway and on the Lofoten Islands. Green sought greater climbing challenges and, in 1881, while attending the British Association meeting at York, saw a 'set of photographs' of the Mount Cook area of New Zealand. 'Here for the first time', he explained, 'I had an opportunity of studying the aspect of Mount Cook and one or two other peaks of the Southern Alps of New Zealand'. While the photographs were 'unsatisfactory' Green saw 'enough to convince [himself]' that Mount Cook was a 'splendid peak'. He arranged to go with two Swiss climbers named Emil Boss and Ulrich Kaufmann.⁹⁰

Green was aware of the value of photography to the traveller in preserving 'a faithful record of the scenes passed through'. He brought a quarter-plate camera, four plate-holders, 150 plates, and the necessary chemicals. This weighed seven pounds. Green's attempts at photography in New Zealand were an apprenticeship. Unfortunately, he 'had not heretofore practised the art' and as a result lost photographs through lack of experience and poor technique. In New Zealand Green attempted to photograph whirling sandspouts, but, 'being unable to get near enough to them they also made no visible impression on the plate'. On the night before an expedition which was 'to be devoted to a long exploration of the Tasman glacier', Green found that

he had not provided proper facilities for changing plates; exposed negatives removed from the plate-holders and unexposed plates loaded for the next day's work were fogged. 'Many a negative was lost or spoiled' he reported 'by trying various dodges to obviate the difficulty'. Green was frustrated by photographic problems and on one occasion late at night was glad to get asleep and be 'in a land where cameras and pyrogallic acid are unknown'.⁹¹ The Hochstetter glacier 'reflected so much light' that Green, 'not having a spring shutter' for his camera, over-exposed his photographic plates. From an elevated position on the Mount Tasman spur Green photographed his goal, Mount Cook, against a clear sky. He discovered what photographers had known for a long time, that 'white snow and blue sky come out almost exactly alike and the contrast of colour which so attracts the eye in nature is altogether lost' on monochrome film. Green had fortunately brought 'drawing materials' with him and he sketched scenes and skylines. Before starting the group's 'attack' on Mount Cook 'a few photographs and sketches' were made. He wished occasionally that he had time 'to make a series of sketches' but the daily schedule of climbing would not permit such a luxury. He seems to have sketched hastily in the field and 'touch[ed] up' sketches later at camp.⁹²

Green continued his mountain climbing adventures a few years later, when, in June 1888, he set sail from Queenstown, Co. Cork, for New York. His purpose was to explore and survey the Selkirk Mountains in the Canadian Rockies in Canada. He was accompanied by his cousin Rev. Henry Swanzy. There were a number of advantages in having Swanzy as a companion. Temperamentally both men were suited to each other and both had climbed in Switzerland

together. Swanzy had also 'recently been practising photography'. He knew the Selkirks, as he had been there with Richard M. Barrington in 1884. When Swanzy returned home from his excursion he gave Green a 'full account' of his adventures:

... his description of the great beauty of the mountain scenery of the Selkirk Range awakened my interest and caused visionary desires to rise in my mind that some day or other I too might have a chance of seeing vast pine forests with their grand background of glacier-clad peaks.⁹³

Green heard that the Selkirks were 'almost entirely unexplored' and that 'it was much to be desired that someone who had experience of glacier-clad ranges should explore them'. He corresponded briefly with the Canadian geological survey in late 1887 and 'determined to go'. It would appear that Green got official sanction to do survey work in the Selkirks. He was loaned surveying equipment by the Royal Geographical Society: a plane table, an alidade, a prismatic compass, and a steel line 220 yards long. He also had a sextant, thermometers, and barometers.

Photography was to be part of 'the special work of our undertaking' with Swanzy taking 'chief charge' of this department. Swanzy brought two cameras, a quarter-plate and a half-plate, and Green brought a half-plate camera and a 'small Stirn's detective camera' which later 'did most satisfactory work'.⁹⁴

In his account of his adventures in the Selkirks Green regularly referred to the carrying of cameras by himself and Swanzy. As the main purpose of photography on the expedition seems to have been to assist surveying, it was used in association with the taking of bearings and the

simultaneous sketching of peaks. Three of the illustrations in Green's book were from photographs by Swanzy. (plates 139, 140). The remainder were from drawings by Green. On one occasion when the group had a 'splendid view of [Mount] Sir Donald and all the surrounding mountains' Green described how they worked:

We remained here for two and a half hours, taking observations, photographing, collecting specimens of antennaria (something like edelweiss), and other flowers which were just showing their heads amongst the rocks where the snow was melting. Looking eastward the great fall of the glacier formed a fine foreground, and beyond it Sir Donald rose in bare precipices.⁹⁵

When mid-way between the peaks of Sir Donald and Mount Bonney, at about 7,800 feet, photography was again used as an integral part of surveying:

The descent of the Geikie glacier promised to be most precipitous, so we determined not to take our camp any further, but to descend, if possible, cross the glacier, and from the slopes of the Dawson Range beyond take such observations and photographs as would enable me to plot out the south side of the range extending from Mount Bonney to the main watershed of the Selkirks.⁹⁶

Green and Swanzy were also interested in glacier photography. Green explored in the area of Ross Pass and the Lily glacier and observed 'nine glaciers all converging' towards a narrow canyon. Here he saw a 'grand amphitheatre paved with ice, walled in by the dark precipices of Mount Bonney, Ross Peak, and the high ridges facing them, and presenting a comparatively small opening towards the Illecellewaet Valley'. He took photographs here. Close to the summit of Mount Bonney, Green and

Swanzy observed a 'perfect ocean of peaks and glaciers', but before they could set up a camera 'clouds broke in a furious shower of hail accompanied by a strong wind'. On Mount Bonney, Swanzy took a photograph of 'the peaks of Mount Sir Donald and the névé of the great Illecellewaet glacier'. The horizon line formed by the range of the Rocky Mountains was visible in the photograph. From an elevated position Green looked down on the Geikie glacier:

The Geikie glacier filling the bottom of the valley presented the most wonderful appearance. I never before saw a glacier so completely broken up into pinnacles of ice by longitudinal and transverse crevasses crossing each other. It presented the appearance of some basaltic formation with the blocks pulled a short distance asunder. A good deal of snow lay on its upper portion, and showed us what difficulties we must have encountered, had we continued our descent by it from the great Illecellewaet snow-field. The light was very good, and though a little smoke had drifted over the mountains into the valley, I succeeded in getting a very good half-plate negative of the glacier.⁹⁷

Another Irish naturalist, Augustine Henry, worked in China from 1882 to 1900. He was employed by the Chinese imperial maritime customs service and he became interested in collecting plants. He ordered a camera probably in the summer of 1896 and received it in May 1897. Though he ordered a Ross twin-lens camera it seems almost certain that he received a Newman and Guardia special 'B' camera. This could be loaded with magazines holding twelve $3\frac{1}{4}$ " x $4\frac{1}{4}$ " plates, facilitating many exposures on an outing. In 1898, when he was transferred to Ssemao, he was given accommodation which included 'a darkroom [and] 3 official cameras'. It is believed Henry took photographs in China of social and botanic subjects. A photograph of hills in

central China reproduced in 1904 in Henry's paper on 'Forests wild and cultivated' may have been taken by Henry. He had some influence on Ernest Wilson, a plant collector and photographer, who had been engaged by Professor Charles Sargent of the Arnold arboretum in Boston. Sargent appears to have sought Henry's advice on the photographic equipment necessary to take high-quality photographs as Sargent's instructions and Henry's hints to Wilson are identical. Henry recommended Wilson to get two cameras, a small camera which would take films $3\frac{1}{4}$ " x $4\frac{1}{4}$ " in size, and a whole-plate camera with a Zeiss or Goerz anastigmat lens. He advised Wilson to use Ilford plates, to take lessons in photography, and to do his own developing and printing. Henry recommended that 'big plates 8" x 6" are necessary for good work'. Later, Wilson was to take photographs in China 'of extraordinary beauty and timeless universal appeal'.⁹⁸

PHOTOGRAPHIC MISCELLANY

1. Photography, political leaders, and royal visits, 1846-1900

From the earliest days of photography politicians were photographed. Richard Beard, a London daguerreotypist, photographed Daniel O'Connell about 1846. The daguerreotype was probably taken in London. (plate 141). On 11 June 1847, Beard advertised in the Liverpool Mercury that 'daguerreotype copies of an inimitable daguerreotype portrait of the late Liberator', and a lithographic portrait, a facsimile of the daguerreotype, could be had at two addresses in Castle Street, Liverpool, or direct from Beard in London. Daguerreotype copies could be supplied 'upon receipt of a post office order': adapted for lockets, brooches, or rings at 12s. 6d., in a standard morocco case at 15s., and mounted in a gold locket at 35s.. Beard also advertised that 'ten per cent of any profits derived from the sale of O'Connell's portraits will be appropriated to the funds of the Irish relief committee'. A medal of O'Connell based on the daguerreotype portrait was also available from Beard to shopkeepers and hawkers and 'through wholesale dealers in London, Dublin, or elsewhere'.¹

In June 1847, similar advertisements were also carried by The Pilot, The Nation and The Kerry Examiner. In Dublin, at Delaney's, 44 Lower Ormond Quay, and at Cranfield's, 23 Westmoreland Street, specimens could be seen and orders placed. The editor of The Kerry Examiner drew attention to the fact that the newspaper bore an advertisement for a 'photographic portrait of Daniel O'Connell':

We have been most kindly favoured with a splendid specimen in a morocco case, and many as are the excellent likenesses we have seen from the most eminent artists there is not one which can at all vie with the photographic specimen before us in beauty of design or fidelity of execution. The portrait is a medallion of, we believe, highly polished steel, and what enhances its value is that the original in the possession of Mr Beard is the only photographic likeness Mr O'Connell ever sat for. It is an incomparable work of art,...

Thomas M. Ray refuted the contention that Beard's daguerreotype was the only photographic portrait for which O'Connell sat. Ray claimed that he had 'a daguerreotype portrait' for which O'Connell sat in Richmond bridewell. It had been taken by M. Dubreuil, whose studio was at the Rotundo in Sackville Street, Dublin.³

Other persons involved in politics in the 1840s were daguerreotyped by Glukman: Terence Bellew McManus, John Martin, Thomas F. Meagher, William Smith O'Brien, Richard O'Gorman, and Pat O'Donohoe. (plate 142). John Mitchell, imprisoned and in exile, was deeply moved when he received Glukman daguerreotypes from home:

Received today a large trunk from home, with some clothes, a few books, and what I value very highly, four exquisite coloured daguerreotypes of Gluckman's (sic): one, my wife in profile, another has my mother and wife together; a third, John Martin, my staunch and worthy friend ... What a mild and benevolent-looking felon! ... The fourth likeness illuminates my cell with the right manly and noble countenance of Father Kenyon. He is standing with his arms folded, and a look of firmness, almost scornful defiance, but tempered and subdued, in his compressed lips and clear grey eye. Now the speaking images of two such friends as these, to say nothing of the first two, will be high and choice companionship for me in my den.⁴

Public personalities continued to be photographed in the 1850s and more especially in the 1860s when the carte-de-visite became available. The most significant direct use made of photography in Irish politics was that made by fenian sympathisers in the mid-1860s. In December 1865 advertisements appeared in The Nation offering carte-de-visite photographs of 'the state prisoners', fenian leaders who had been arrested: John O'Leary, Charles J. Kickham, Jeremiah O'Donovan Rossa, John Haltigan, Michael Moore, the pikemaker, and the informers Pierce Nagle and Herman Scholfeld. These could be had from J. H. Burke, 44 Lower Ormond Quay, Dublin. A carte-de-visite of their counsel, Isaac Butt, was also on sale. Lawrence's of Sackville Street published carte-de-visite portraits of 'James Stephens, the Head Centre'. By April 1866 photographs of 'Patrick Heyburne, the barber', W. F. Roantree, and a collage of fifteen portraits of fenian leaders with the fenian bond were offered for sale. (plates 143, 144, 145). A 'shamrock carte' was also offered to the public 'printed in gold, with three portraits set, one in each leaf'. Clients interested in this offer could nominate which three fenian leaders' portraits they required on the three leaves of a shamrock design. The price was one shilling.⁵

Sir Thomas Larcom was aware of the use of such photographs, acquired copies of them and had them pasted into a scrap-book. He had, for example, a photograph of Denis Dowling Mulcahy, a photograph of the 'fenian executive', a photograph of a drawing poking fun at 'The fenian trials - a scene in an Irish court of justice' and a photograph of the 'New fenian bond'. (plate 146). From late April 1866 photographs of fenian leaders were no longer advertised in The Nation. This may have been because

anyone carrying cartes-de-visite of fenian leaders or of nationalist leaders of the past, would come under suspicion and be liable to arrest under the Habeas Corpus Suspension (Ireland) Act. Instead of photographs of fenian leaders, three carte-de-visite photographs of 'the patriot archbishop', Most Rev. Dr John McHale, in different poses, could be had from O'Hogain's, 32 Middle Gardiner Street, Dublin. Dr Paul Cullen, archbishop of Dublin and an opponent of McHale in politics, had his photograph taken in April 1866 by the firm of Lawrence and later in the year posed again before the camera dressed as a cardinal standing on a balcony with seven clergymen. In 1866 The Irish People (New York) regularly advertised cartes-de-visite photographs of fenian leaders. Sir Thomas Larcom was photographed in a studio and a number of photographic poses of Lord Naas were available in the 1860s. While the photograph of Larcom may have been for private use photographs of Naas were included in a number of contemporary albums and presumably could be purchased from print sellers.⁶ (plate 147).

Superintendent Daniel Ryan reported to Larcom how he and a number of men of the detective division of the Dublin police had made a surprise raid early on a Saturday morning on a house at 20 Cullenswood Avenue, Ranelagh, Dublin. There they found four men in a bedroom. One man had 'a carte-de-visite of O'Leary, Kickham, Stephens, and Mrs. O'Donovan Rossa, a group consisting of Stephens, Luby, O'Leary, Kickham, O'Donovan Rossa, O'Connor, Denis Dowling Mulcahy, and George Hopper'. Ryan believed that the photograph of Stephens 'taken from life' was without doubt 'a pretty correct one'. Possession of such photographs was regarded as an indication of fenian sympathy. In January

1868 at Hillsborough, County Down, James Mullans was arrested. He had come under the notice of the constabulary because he wore clothes somewhat similar to army uniform and was suspected of being a deserter. This suspicion proved to be correct and among his belongings was 'a carte-de-visite of Robert Emmet'. The sub-inspector involved in the case believed that 'Mullans was connected with fenianism, or at least, a sympathiser, as the portrait of Robert Emmet was found on his person'.⁷

Photography continued to be used in a number of ways in political and national affairs. In 1879 Lawrence's of Dublin published a cabinet size photograph of the Land League executive. Cabinet size photographs of A. M. Sullivan M.P., who defended Patrick Egan in 1881, were sold by Lalor's of Talbot Street at 2s. 2d.. William Lawrence of Upper Sackville Street, Dublin, also published a photograph of A. M. Sullivan. Lalor's offered for sale 'microscopic photo views of Mr Parnell' and also 'a group of leading Land Leaguers' priced at sixpence. Lalor's also offered photographs of John Dillon and Michael Davitt. These 'two-fold' sachets were decorated with 'shamrock border, gilt harp, Irish motto and flowers, beautifully embossed in silver,...'.⁸

In the 1880s Lawrence's took portraits of many members of the Irish parliamentary party. In the period April 1883 to June 1885 the M.P.s Thomas Mayne, Parnell, J. F. Small, J. H. McCarthy, and T. P. O'Connor were photographed. In the period June 1885 to May 1887 the following M.P.s were photographed: J. Deasy, P. Callan, M. J. Kenny, J. O'Connor, W. H. K. Redmond, J. E. Redmond, and W. J. Corbett. Often a number of poses were taken in each photographic session. In Parnell's case the photographer

took about twelve poses. Normally, Lawrence's indoor photographer, Henry Magee, would take three or four poses of a client in a studio session. By 1890 Lawrence's offered a complete set of portraits of the members of the Irish parliamentary party.⁹

Scenes and incidents to do with the land war in the 1880s and the 1890s attracted the notice of photographers. Arthur Reynolds exhibited a number of 'Irish scenes' in the Royal Photographic Society's annual exhibition in which he showed 'a series of interior studies from the kitchen, the drawing room, and the cabin'. In another set of photographs Reynolds staged 'one of those agrarian outrages which have gained for our sister Ireland so unenviable a notoriety'. He had photographed two masked villains firing from a convenient break in a wall at a number of passers-by. One person was also shown in the act of falling. The episode was 'well simulated' but a critic questioned the 'good taste or artistic feeling' of the work and was quite convinced that it was 'not art'. In 1889, Robert Banks, a Manchester photographer, photographed at Falcarragh and at Derrybeg, County Donegal. He photographed Rev. James McFadden, his church, his parishioners, and the house of Neil Doogan of Falcarragh, showing a badly damaged wall and roof. Investigative photographs were also taken at Derrybeg in connection with the death of a constabulary inspector, as discussed above, in which McFadden was involved.* Lawrence's of Dublin advertised a set of sixty lantern slides, the originals of which had been taken in the period 1886-90. These included the Vandeleur and Clanrickard evictions, and evictions at Coolroe, Coolgreaney, Gweedore, Glenbeigh, Bodyke, and Clongorey. A reader of The Amateur Photographer sought a loan of 'a few

* Above, ii, pp 14-15.

negatives of Irish eviction scenes' for the purpose of making lantern slides. In 1890 Elizabeth Butler exhibited a large painting, 'An Eviction in Ireland', at the Royal Academy. It was based on studies she had made in the Glendalough district of County Wicklow and of an eviction scene she had visited. The eviction scene also interested the creative photographer: in 1898 Alfred Werner exhibited at Brussels a photograph entitled 'Evicted' in which a lone woman wept at the loss of her home seen some distance away.¹⁰

Photography was also used in the Plan of Campaign phase of the land war. The Roman Catholic church, through Dr William Walsh, Archbishop of Dublin, and Dr Thomas W. Croke, Archbishop of Cashel, supported the plan, which involved withholding the payment of rents to landowners. The withheld money was paid into a fund controlled by local trustees, the money to be used to support evicted tenants. Priests became involved in the support and administration of the plan. Canon Daniel Keller of Youghal, County Cork, was summoned to the bankruptcy court in order to induce him to disclose the whereabouts of Plan of Campaign money under his control. In late March 1887 Keller was sent to prison for contempt of court. Almost immediately Robinson's of Grafton Street, Dublin, saw the commercial possibilities of having a photograph of Keller for sale. They wrote to T. D. Sullivan, lord mayor of Dublin and a member of the visiting committee at Kilmainham Prison. Sullivan's request to the governor suggests that the idea was not Keller's as Sullivan mentions that photography could only take place if Keller was 'willing to sit for his portrait' and if he had 'no objection'. Sullivan himself supported the proposal stating that he 'would be glad if permission

could be accorded to the Messrs. Robinson'. The prison board refused the application on the grounds of 'no precedent'. The idea of using photography in this way arose again a month later when Rev. Matthew Ryan of Hospital, County Tipperary, imprisoned for similar reasons as Keller, wrote to the governor of Kilmainham prison, asking that he 'be allowed the privilege of sending my photographs to any friends I should like to compliment in this way'. In Ryan's case he already had possession of a photograph 'taken previous to committal'. This application was refused because, if allowed, 'all other prisoners in the same class would be entitled to a similar privilege'.¹¹

In 1888 photography was used innovatively in connection with the investigation of a death in Mitchelstown the previous year. Rioting, injury, and a death occurred there on 9 September 1887 and became known as the Mitchelstown massacre. A person named Michael Lonergan had been shot dead within sight of the police barracks. The police came under suspicion and at a coroner's inquest in October the jury returned a verdict that the gunshot wound had been inflicted by 'a party of police under the command of [a] county inspector'. A. J. Balfour, the chief secretary for Ireland, appointed a commission to investigate the incident. On 11 June 1888, having received the commissioners' report, Balfour stated in the House of Commons that it was physically impossible to fire a rifle shot out of the window from which the shooting took place in the direction of the place where Lonergan had been standing. H. J. Wilson, M.P. for Holmfirth in Yorkshire, was unhappy about this explanation and visited Mitchelstown in August. In the police barracks he placed himself at the window in question and found he

could aim a rifle at a constable standing where Lonergan fell. Working from the window with a pocket camera, Wilson photographed the constable, the square in the town, and the street. Standing outside at the spot where Lonergan fell, Wilson photographed the police barracks. He was satisfied that the culprits had fired from the barracks window.¹²

Another example of an unusual use of photography was its use in court by Patrick O'Brien M.P.. In November 1890 conspiracy trials were being held in Tipperary. O'Brien was in court and had a Kodak camera with him. He was seen 'apparently explaining the mysteries' of the camera to David Sheehy M.P.. Mr S. Ronan Q.C., who appeared for the Crown, assumed the camera was to be used in court and asked the magistrates 'whether they would permit the photographing of a witness in court'. A magistrate ruled that the camera could not be used in court and John Redmond M.P. stated that 'Mr O'Brien had no intention of photographing the witness'. The matter appeared to have ended until O'Brien, about to cross-examine a witness, sought his permission to photograph him. Permission being granted, O'Brien moved with 'startling rapidity', pointed the camera at the witness, and took a photograph. The magistrates indicated that a 'distinct pledge' given to the court had been broken and the police were directed by the magistrates to take the camera 'forcibly' from O'Brien. Redmond managed to get the camera out of the court and returned to advise O'Brien to apologise to the court 'for what has occurred'. O'Brien refused to apologise, arguing that he had had the permission of the witness to use the camera. He was sentenced to seven days imprisonment for 'gross contempt of court'.¹³

Royal visits to Ireland were commemorated through

photography. Photographs of state occasions and of public personalities were an accurate, vivid, and relatively inexpensive means of making a souvenir and also a way of expressing loyal sentiments. The visit of the prince of Wales to Ireland in 1861 was essentially a private and personal visit. While the prince's arrival was announced and he was cheered by large crowds in Dublin the purpose of the visit was to bring him to the rank of brigadier. Prince Albert, whose idea it was, agreed to a programme of training for his son with General Robert Bruce and Sir George Browne, G.O.C., Ireland. The plan was partially successful, the prince being able, at the end of ten week's training, to move a brigade only 'with expert assistance'.¹⁴

The prince's life in camp, on and off duty, was photographed. One series of photographs 'Souvenir of soldiering at the camp Curragh' was compiled probably by Captain E. D. Fenton of the 86th regiment. The series of photographs contains formal subjects such as squares of soldiers being manoeuvred, the presentation of colours to a regiment by the prince of Wales, and grenadier guards being manoeuvred with 'the prince of Wales in command 11 September 1861'. The lighter side of life was also recorded with photographs of a soldier drinking from a tankard, a street in a poor quarter of Kildare town entitled humorously 'Street in the city of Kildare', and off-duty men bathing nude at Poulaphuca. The prince of Wales kept a set of photographs of his stay at the Curragh; some seem to have come from Captain Fenton and others possibly from George Mansfield, Grafton Street, Dublin, a landed gentleman and businessman who had a professional studio in Grafton Street, Dublin, and who lived at Naas,

County Kildare. In August Mansfield announced that 'photographic groups of H.R.H. the Prince of Wales and officers of the grenadier guards, recently taken by him at the Curragh camp' were on view at his premises and that duplicates could be purchased.¹⁵

In September 1861, immediately after leaving Ireland, the prince of Wales met his future wife, Princess Alexandra of Denmark, near Heidelberg. The meeting did not remain a secret and became public knowledge through the work of German journalists. One year later in Belgium, on 9 September, the prince proposed to Alexandra and the engagement was made public on 16 September. Frederick H. Mares, a Dublin photographer, discussed above,* was ready to exploit the event and on 19 August, three weeks before the prince proposed marriage, he registered for copyright a photograph of the prince of Wales and Princess Alexandra. The published photograph would carry the motto 'May you be happy'. On September 23 Mares applied to register copyright on another photograph of the couple and a month later registered carte-de-visite twin vignette photographs of the royal couple inscribed with the motto 'Cead mille failthe' (sic). (plate 148). Earlier in the month Austin's of Westmoreland Street offered single and double portraits of the royal couple 'taken a few days since in Brussels' and 'forwarded through our agent to us'. These photographs may have originated from Mares who at this time had seen the commercial potential of the carte-de-visite. At about the same time he informed the prison office in Dublin that he would not continue with prison photography, discussed above,⁺ due to a lack of time.¹⁶

The prince of Wales and Princess Alexandra were married on 10 March 1863 and cartes-de-visite of the royal

* Above, i, pp 35-7.

family and the prince and princess were advertised. Burke's of Ormond Quay, Dublin, offered original photographs at 1s. 6d. and 'very good copies' at 6d. Bewley & Evans offered for sale at 1s. 6d. a photographic reproduction of a painting of the prince and princess. The reproductions could be purchased by post for nineteen stamps.¹⁷

The prince of Wales came to Ireland on two further occasions in the 1860s. In 1865 H. D. Browne of Kingstown was well placed to photograph the 'entry into the harbour' of the prince and 'his landing on the Carlisle pier'. Lesage of Dublin seems to have acted as an agent for Browne by displaying the photographs at railway stations. Browne also photographed the prince leaving Ireland and Mansfield secured a private order for photographs from the prince. Belfast print sellers did not advertise cartes-de-visite of the prince of Wales on this occasion.¹⁸

The idea that the prince of Wales should visit Ireland in 1868 came from Disraeli and Lord Mayo. Disraeli believed that a royal visit would allay discontent in Ireland while Mayo felt that the fenian chapter in Irish affairs would finally be closed and an era of reconciliation opened. Queen Victoria was apprehensive about the idea and when she finally agreed to the visit she insisted that her representative, the lord lieutenant, Lord Abercorn, would take precedence in a public entry into Dublin. The prince and princess of Wales came to Dublin on 15 April and returned on 24 April. The visit was very successful, involving a programme of balls, reviews, attendance at race meetings, the unveiling of a statue of Edmund Burke outside Trinity College, and the formal purpose of the visit, the prince's installation as a knight

of St. Patrick¹⁹

The Dublin photographers and print sellers offered a variety of photographs to the public who wished to have souvenirs of the occasion. Browne's and Clarendon's of Kingstown offered for sale photographs of the arrival and departure of the royal couple at Kingstown and McDowell Bros. of Wellington Quay advertised similar photographs. In Dublin one print seller offered for sale the latest cartes-de-visite of the prince and princess of Wales, the duke of Cambridge, and the marquis and marchioness of Abercorn. Chancellor's of Sackville Street appear to have been given special facilities to take 'four group photographs of their royal highnesses the prince and princess of Wales, their excellencies the marquis and marchioness of Abercorn, and several others of our late august visitors'. These photographs were 'graciously approved by their royal highnesses' and 'highly spoken of by the Dublin press'. While the royal couple attended functions in the Dublin area there was public interest in the visit in locations outside Dublin. Photographs of events on the royal programme do not appear to have been offered for sale to the people of Cork, for example, who were reminded that the Illustrated London News was fully illustrated with 'all the chief incidents of the visit'. In Belfast cartes-de-visite of the royal couple were not advertised but northerners were reminded that the Illustrated London News had illustrations of the arrival of the prince and princess of Wales at Kingstown, the procession passing through College Green, and the Punchestown races.²⁰

The prince and princess of Wales visited Ireland again in 1885 from 8 April to 27 April. The royal party visited

Dublin, Cork, Killarney, Limerick, Belfast, and Derry. The reception in Dublin and the north of Ireland was loyal and enthusiastic but in Cork the visit was not enjoyable. The prince's equerry, Arthur Ellis, reported to the Queen that the couple were hissed and booed by sullen-faced people waving black flags. Ellis continued: '... no one who went through this day will ever forget it ... it was like a bad dream'. Hostility, encouraged by the National League, was widespread in Munster, in Tralee, Listowel, Newcastle West, and Limerick. The atmosphere in Cork did not encourage the print sellers to buy photographs expressing loyalist sentiments; such photographs were not advertised in Cork during the visit.²¹

Photographers were involved in a number of ways in publicising the various phases of the tour, promoting loyal sentiments among the general public by providing photographs of the royal couple and entourage, and offering special studio facilities to the loyal Irish participating in public events. Within the first week of the tour it was reported that Chancellor's was appointed official photographers to Princess Alexandra. The firm immediately provided special facilities 'set apart' in order to photograph those who attended a levee and who were presented to the royal couple in the drawing room at Dublin castle. Lafayette's had new scenery painted and obtained new studio accessories in order to produce portraits 'in court and evening dress'. Monsieur Sauvy who had studios in Dublin and Cork was prepared 'to take photos in court costume, ball and regimental dress'. John Chancellor travelled to Killarney, on instructions from the prince of Wales, 'to photograph groups and other pictures connected with [the] visit to Killarney'. Group photographs were

taken at Muckross abbey and at Muckross house. Later in the month Chancellor's offered for sale to the public 'most life-like and pleasing portraits of the prince of Wales and Prince Albert Victor'. Lafayette's also had a photographer at Killarney and both Lafayette's and Chancellor's photographed the royal party at Derrycunihy waterfall. For reasons that are not clear Lawrence's of Dublin did not have a comprehensive set of negatives of the principal events of the tour. Lawrence's were interested in making up a set of lantern slides of the visit and sought, by public advertisement, photographs of aspects of the royal visit: the landing at Kingstown and places visited by the royal party.²²

The royal visit caused great excitement in the north. This may have been because the north had not been included on the prince's itinerary on his earlier visits to Ireland and northerners were now eager to show and celebrate their loyalty. This was reflected in the number of portraits and other photographs made available to the public. The first to announce the publication of portraits were the proprietors of the Belfast Newsletter and the Belfast Weekly News who stated that they would issue a royal supplement with both newspapers which would contain a 'faithful likeness of their royal highnesses'. The portraits of the prince and princess 'photographed from nature, were transferred directly to stone by a modern process which preserves the integrity of the likenesses'. A number of northern photographers advertised photographs of the royal visit. Robert Seggons, Castle Place, Belfast, took photographs of 'the farewell to royalty' on board ship. Seggons also had for sale photographs of 'the principal street decorations'. Robert J. Welch went to

Carrickfergus 'to secure several good instantaneous photographs of [the] opening ceremony at [the] harbour extension works, including the royal party'. Welch also had for sale 'special photos' of the Belfast decorations. James Magill, Donegall Place, Belfast, took photographs of the prince and princess of Wales and Prince Albert Victor, the duke and duchess of Abercorn and family at Baron's Court, Newtown Stewart, Co. Tyrone. Thompson, a professional photographer from Omagh, produced a series of six photographs 12" x 10" in size for one guinea. The set included photographs of the rooms occupied by their royal highnesses at Baron's Court and the royal couple leaving Baron's Court in their carriage. Single copies could be had for 4s..²³

The duke and duchess of York came to Ireland on 18 August 1897 and visited Dublin, Powerscourt, Leopardstown races, Killarney, Belfast, and Derry. The duchess commemorated the visit by keeping an album of photographs taken from two sources. A number of photographs were titled and dated having been taken at events in which the duchess had participated or places she had visited: landing at Kingstown, driving through Dublin, the opening of a textile exhibition, Leopardstown races, the Powerscourt estate, Co. Wicklow. The duchess also included in her album a number of views by Robert J. Welch of Belfast and Lawrence's of Dublin. 'Dublin castle from the garden' and 'St. Patrick's hall, Dublin castle' were views by Welch kept by the duchess; nine photographs of Killarney house by Lawrence's were also mounted in the album. The south of Ireland and Killarney were on the royal itinerary and in Cork Guy's advertised their copyright views of Killarney, Glengariff, Cork, and Queenstown. A bound set of 103 views

cost 3s. 6d.. The royal party arrived in the north of Ireland on 1 September and were received enthusiastically. Photographers in the north do not appear to have advertised photographs of this royal event; this may be explained by the fact that over the years photographs of public personalities had been readily available and the market was saturated; another possibility is that portraits of the duke and duchess of York were offered free with issues of weekly periodicals which cost as little as 1d. as had been done in Belfast in 1885.²⁴

In 1900 when Queen Victoria came to Ireland few would have remembered her earlier visits in 1849, 1853, and 1861. The fashion of buying individual photographs of personalities and events, begun in the 1860s, had waned by the end of the century. Photographs had been used to commemorate royal visits and to encourage loyal sentiments but it was now possible, because of the development of the half-tone block process, to buy periodicals in which there were many photographs reproduced. A special issue of the Lady of the house, for example, was published at 1d. and had forty illustrations to do with the Queen's visit. Reproductions of photographs by Chancellor's, Lawrence's, and Lafayette's were included in this issue in which portraits, standard commercial views, and specially commissioned photographs were used of the Queen, the duke of Connaught, the lord mayor of Dublin, the Mansion House, Dublin, and the keys of the city of Dublin. In a later issue a photograph by Chancellor's of two children from the royal entourage visiting a child patient in the children's hospital, Temple Street, Dublin, was reproduced.²⁵

Loyalists in the north of Ireland had photographs taken to commemorate important events and celebrations.

Photographers equally saw the commercial possibilities of reproducing such photographs in quantity and probably took the initiative in taking newsworthy photographs. An early example of this type of work is a portrait of William Johnston of Ballykilbeg house, Co. Down, taken at the end of April 1868. Johnston had been prosecuted 'for a breach of the party processions act' at Downpatrick and had been sentenced to one week in prison. He was released early, on 27 April, on grounds of ill health. By 1 May James Magill, Donegall Place, Belfast, had photographed Johnston and published his photograph in various sizes. Magill addressed his advertisement 'to the Orangemen and protestants of Ireland' to whom he offered a 'portrait of Johnston of Ballykilbeg'; a carte-de-visite was 1s., a whole-plate photograph was 2s. 6d., and a large portrait was offered at ten guineas.²⁶

A. G. Massey of Armagh, a professional photographer, photographed the official opening of the Portadown Orange Hall on 12 August 1875. On the same occasion he also photographed a demonstration of the Apprentice Boys of Derry. Later in the year at Lough Mask house a leader of the Ulster expedition to help Captain Boycott, Lord Erne's agent, decided not to antagonize the local people by allowing the wearing of an orange scarf in a posed group photograph. The Monaghan contingent of the expedition was upset by this suggestion and the whole group was kept together and a photograph taken only with much cajoling. William Abernethy had no such difficulty photographing members of the Grand Orange Lodge of Ireland in 1895. This was the order's centenary year and Abernethy photographed battle of the Boyne celebrations at Holywood. His photographs were ready for sale on 13 July at 3s. 6d. per

copy.²⁷

Photographers remained aware of the political potential of their work and the commercial possibilities of photographing political subjects. In 1885, Welch of Belfast, photographed a specially constructed arch of welcome for the prince and princess of Wales. (plate 149). In 1886 he photographed Bower's Hill police barracks with its broken window panes shortly after it had been attacked by anti-Home Rulers. About 1890 he photographed an Orange procession in Shaftesbury Square, Belfast and in 1903, when Edward VII visited Belfast, Welch photographed Donegall Place decorated with flags for the occasion. (plates 150, 151). Lawrence's of Dublin were also conscious of this aspect of the photographic trade and in 1897 Robert French photographed a street scene in Coleraine with an overhanging banner proclaiming 'God Save the Queen'. French also photographed the nationalist aspect of Irish life. In Mitchelstown, near the police barracks, he photographed a 'Plan of Campaign - No Surrender' banner and in 1890 he photographed O'Brien's Arcade, a street scene in New Tipperary. (plates 152, 153). This had been built as an alternative to the rented shops owned by A. H. Smith-Barry in Tipperary town.²⁸ These two photographs illustrated aspects of the Plan of Campaign.

Under the terms of the official secrets act of 1889, it was laid down that any persons wrongfully obtaining information of military establishments, by sketching or photographing such places, would become liable to a fine or a term of imprisonment. A similar law had already operated in Gibraltar, in France, and in other European countries. The Amateur Photographer advised its readers not 'to be seen using a camera, sketch-book, or even a map within a

mile of a fort' in France. While sailing in the Mediterranean in 1894 and in 1895 the earl of Cavan knew of the dangers of photographing military and naval installations, and he warned his readers:

As on board every yacht there is almost sure to be some person interested in photography, it may be as well to remind the reader, that the taking of photographs in or near French fortified towns is a most hazardous and dangerous experiment. Perhaps no nation is more anxious to preserve its fortifications from the intrusion of the photographer than is the French, and if the prison doors seem always open to receive the delinquent, he ought not to complain if due warning has been given. The entrance to a French prison is, to the photographer, made easy, the exit extremely difficult, so I warn my readers in time.²⁹

2. Friendship and romance

From the earliest days of photography photographs were enclosed in parcels and in letters and sent to friends and relations. One writer in the Dublin University Magazine saw a connection between romance and photography:

At the daguerreotype art
Sweet girl I must own thou art clever
For with one sunny glance on my heart
Thou hast painted thy image forever.³⁰

In 1842-3 Henry Brewster sent his earliest attempts at calotype photography to his father in Scotland and in the 1840s Glukman daguerreotypes were sent out to John Mitchell in exile in Van Diemen's Land. The daguerreotype being relatively bulky in its standard leather case was not particularly suited for enclosure in an envelope. An early Irish example of photographs being sent through the post was that of three photographs sent to Henry T. Somerville in the Crimea in 1854. One was of a family group of two

women and seven men, another was of a group playing croquet, possibly at Belvedere House, Drumcondra, and the third was of Sir John Coghill sitting at a table laden with photographic equipment and chemicals. Somerville kept them carefully and they were eventually pasted into an album kept by Adelaide Somerville, Castletownshend, County Cork.³¹ (plate 154).

When professionally made paper photographs became available relatively cheaply in the carte-de-visite era the sending of photographs through the post became more common. In the 1870s, Michael Davitt, imprisoned in Dartmoor, missed seeing members of his family and his new nephews and nieces as babies. In the first of his smuggled letters about May 1875, he asked for a photograph of his mother, other members of the family, and of his niece, Mary Anne, whom he had not seen as she was born after he was sent to Dartmoor. By September he had received photographs as requested and was delighted with them. He wrote to his mother:

You can little imagine what a source of pleasure I find in them. I try to persuade myself that you do not show the traces of sorrow and grief my misfortunes must have caused you, and that you appear no older than when we parted nigh six years ago ... I fail to see any remarkable change in Anne's appearance to account for a statement to that effect in one of Sibby's letters. She seems the least changed of any. Sib herself looks as if she were the recognised champion of women's rights, so determinedly American does she appear. The little stranger I suppose is M[ary] Anne, ... She has a very intelligent face,
wearing quite a saucy look.³²

Irish emigrants also sent photographs through the post. Alexander Crawford from Belfast emigrated to Australia in 1880 when he was twenty-two. He worked on his

uncle's farm near Ballarat in Victoria, and fell in love with his cousin Elizabeth Jane who was known as Lillie. He became engaged to Lillie early in 1881 and while working on a sheep station and at gold diggings he began a correspondence with her. This continued when he accepted a position as manager of a sheep station in Western Australia. He carried a lock of Lillie's hair with him in a locket and she had a photograph of him:

That saving young man I wrote about and whose photo you wear in your locket never saved a penny scarcely in his life until within the last year and now he saves all he possibly can and then thinks he does not save near enough, and all that is through you, so you see what an influence even a little woman can have on a person whom she loves and who loves her although separated by thousands of miles.³³

Another Ulsterman, James Twigg of Cookstown, County Tyrone, who emigrated to Western Australia in 1891, received and sent photographs by post. He was intensely homesick from the beginning and he asked by letter for a photograph of his father. When the photographs arrived they made Twigg even more homesick. With the passage of time he was aware of physical change in his family, and in relation to one photograph, stated that he could see 'no change in you at all'. In September 1897 Twigg was successful at gold prospecting but it took its toll on his health. Intending to have his photograph taken and sent to Ireland, he decided to wait until his health was better and until he had bought better clothes:

I will get my photo taken in Perth in a few weeks when I get all right. I had no clothes when I was coming down from Cue or I would have got it done then. I think you will find me little changed in appearance, but a few more years of the life I've led on the back

blocks would make an old man of me.³⁴

Two months later he was still concentrating on improving his health and getting his weight up to eleven stone, so that he could be photographed in Perth. In 1900 he wrote to his sister that he would 'get photoed again when I go up to Perth next'. He expected a photograph of his sister in return and reminded her to 'send me one of yours'. In 1902 he decided to build a house to replace his hut and he wrote to his brother the following year that he would 'send [him] a photo of it when finished if I can capture a Kodaker anywhere'.³⁵

Postcards were introduced by the post office in Britain in 1870. The address was to be on one side of the card and the message on the other side. Illustrations were not permitted although they had been used on stationery and envelopes in the 1840s and the 1850s. In 1870, on the continent, cards bearing illustrations were sent through the post by French soldiers in the Franco-Prussian war. The first picture postcards, as the term is now understood, were posted from the top of the Eiffel tower at the Paris exhibition of 1889. In the 1890s the popularity of the picture postcard increased on the continent, especially in Germany, and picture postcards emanating from the continent were accepted for delivery in Britain. Eventually, the British postal regulations were relaxed and picture postcards were used in Britain from 1 November 1899. The picture was to cover only part of one side of the card leaving space for a message. The address was to be on the reverse side. Corkett's of Leicester, Valentines's of Dundee, and Lawrence's of Dublin, for example, produced such cards. In Britain and in Ireland personal postcards

in the same style were made by professional photographers from clients' negatives. In January 1902 it was announced by the British postal authorities that it was permitted to have the address and greetings on one side of the card, separated by a line down the centre, thus freeing the whole reverse side for a full-size illustration. In the early twentieth century photography would play an important role in the expanding picture postcard industry in the British Isles.³⁶

In the 1870s advertisers in matrimonial columns sought and exchanged photographs of prospective partners. Some advertisers neglected to mention photograph exchange, even when the practice was more commonplace in the 1880s. In 1870 a Welshman aged twenty-two, in the drapery business, wished to correspond with 'a young lady of the middle class possessing some means, with a view to matrimony'. He sought 'all particulars' including a photograph with the reply. The same year another gentleman through a similar advertisement sought 'replies with a carte DV'. Two years later a gentleman took a different approach; he would send a carte-de-visite 'on hearing by post' from a lady. One young man, twenty-five years of age, stated that he had an income of £300 per annum and wished to correspond with a young lady. As he was 'bona fide' he expected to be given an address 'in the first instance'. A photo would be 'returned if not approved of'. Four years later in 1884 a young Church of Ireland gentleman, aged twenty-five, stated that he was 'worth over £500 a year'. He hoped 'to receive photos for inspection'. An advertiser in 1886 wished to meet 'a christian young lady with a view to an honourable engagement'. Photos in this instance would be treated 'in strict confidence'. In 1891 a young man who perhaps had

been disappointed by replies in the past wanted ladies to 'enclose photo, real name, and address'.³⁷

Advertisers in matrimonial columns were usually men but women advertised also. Perhaps there was a fun element in the advertisement inserted by 'two young English ladies', aged twenty, who wished to correspond 'with two Irish gentlemen' with a view to matrimony. In replies they expected a 'carte and address' but gave little away themselves by providing only their initials and a forwarding address. The woman who advertised on 17 March 1877 was made of sterner stuff:

A widow aged thirty two, presbyterian, with a respectable business realising about £200 a year, wishes to meet with a respectable partner ... enclose carte, which shall be honourably returned if not approved of, and name and address.³⁸

A young woman of twenty-three advertised in 1895. She was 'said to be good looking', 'amiable', and 'thoroughly domesticated'. She was 'anxious to correspond' with a gentleman with a view to matrimony and would return photographs.³⁹

3. Photography and the poor

The poor occasionally came under the scrutiny of the camera. Early examples of photographs of the poor in Britain include Henry Mayhew's London labour and the London poor (1851 and 1861), and Street life in London (1877) by John Thomson and Adolphe Smith. One of the earliest series of photographs of rural poverty in Ireland is to be found in an album compiled by James Glass of Derry. The album contains twenty-four photographs taken in the early 1870s in the Gweedore district of Donegal. In his photographs

Glass recorded traditional farming methods and house types and conveyed the physical barrenness of the landscape. Robert French, the outdoor photographer of Lawrence's of Dublin, photographed victims of rural evictions and the people of the backstreets and lanes of Dublin. Lawrence's managed to have a photographer at some eviction scenes when there was tension and drama but this was not always possible; one remedy was to photograph sham evictions with tenants and constabulary in confrontation as was done at Somer's fort in Wexford. (plate 155). In 1894 a member of the Photographic Society of Ireland, Leonard R. Strangeways, exhibited photographs in the society's annual exhibition. The photographs included 'selections of scenes and scraps illustrating low life as it is found in the back streets and slums of Dublin'. He was awarded a bronze medal, and a critic praised his 'market day in Nicholas Street'. In 1898 a committee for the relief of rural distress published a pamphlet entitled Relief of distress in the west and south of Ireland illustrated by photographs taken in the affected areas. Some standard scenic views by Guy's of Cork were used but other interior photographs showed conditions of poverty and appear to have been specially commissioned: four views of families on Garumna Island, a 'sick family' at Carraroe, a 'very distressed family' at Carraroe, and a family on Garumna Island eating indian meal 'supplied by relief committee'.⁴⁰ (plates 156, 157).

In London Dr Thomas J. Barnardo, who was born in Dublin and had done some work in the slums there, used photography in connection with his work with orphaned children. A photograph of each child under his care enabled him and his staff to have a 'faithful record'

which, with the passage of time, would make it possible to recall 'minute circumstances', about a child. Should any child become involved in crime or abscond from the homes, it was believed a photograph would be useful in searching for and identifying the child. A controversial aspect of Barnardo's use of photography was the sale of photographs for the benefit of his institutions. In an official inquiry Barnardo was found to have used 'deceptive photographs' of children; he dressed children in rags who had been placed well dressed in his care and he posed children as newspaper sellers when in fact they had not been newspaper sellers.⁴¹

In 1878 an orphan society, The Protestant Orphan Society, Dublin, also used photography to assist in the keeping of records. The society had been founded in 1822 and in the 1870s had an address at 17 Upper Sackville, Dublin. Children coming under its care were placed with protestant 'nurses' in rural areas near a church and a school in counties Dublin, Kildare, and Wicklow. It is likely that the society used photography in the early 1870s but the earliest photographs known to have been ordered by the society were taken on 13 September 1878. Three photographs of 'the orphans Robinson' were taken on this occasion. The practice of photographing orphans continued well into the 1890s; this was probably done to remember better the personal details of orphans or perhaps to assist in their placement in homes. There is no evidence to suggest that the photographs were used to raise money. From October 1885, boy orphans, old enough for training on the 'Clio', a training ship at Bangor in north Wales, were dressed in sailor uniform and photographed in a Bangor studio.⁴²(plate 158).

Originally the orphan photographs taken in Dublin were taken by Millard & Robinson, 39 Sackville Street, Dublin. An album was bought at Parson's, the society's regular suppliers of stationery, next door to the photographic studio. In 1884, the society began to use W. G. Moore's photographic studio; Moore also did work, as discussed above, for the Royal Irish Academy.* Convenience must have dictated this decision as Moore's was only a few yards from the society's premises in Sackville Street. In the period 1881 to 1893 over £40 was spent on photographs of orphans. This represents the cost of about 320 carte-de-visite photographs. An album belonging to the society contains 189 cartes-de-visite, mainly of orphans photographed by Moore or a local Bangor photographer. A small number of photographs are of 'nurses' or foster mothers employed by the society: Mason of Enniskerry; Dixon of Clonegall; Griffin, Byrne, and Brownrigg of Carnew; Bannister, Kelly, and Levrison. The album also includes a photograph of Captain William Milner Mager, R.N., of the training ship 'Clio'.⁴³

4. Divorce, explosions, and fire.

A number of tragedies occurred involving persons and firms connected with the photographic trade. In April 1881 Mrs Kate Lesage petitioned for a separation from her husband Auguste E. Lesage, 'a photographer and print seller', 40 Lower Sackville Street, Dublin. Lesage had built up a good reputation as a portrait photographer; one of his renowned assignments was a series of photographs of the catholic bishops of Ireland. These photographs were mounted in an album and presented to the Pope during the Vatican Council in 1870.⁺ Kate Lesage sought a separation on the grounds

* Above, i, pp 150-51; + above, i, p. 27.

of adultery and cruelty. Her counsel, however, decided to confine himself to proving the charges of cruelty. Cross-examined in court she stated that she had married in 1866 and now had three children. Her husband had left Ireland in October 1880 and she did not know where he was. She described how within two years of being married Lesage 'was very cruel to me and my mother' and 'beat me frightfully with his hand'. In 1872 she 'had to run away in the broad daylight' and was later to leave her home 'four or five times' due to ill treatment and 'seek refuge with a friend'. Over a number of years he had threatened her with a revolver 'several times' and on one occasion he 'took a poker' to her and almost killed her. The court was told that he made her kneel and told her she was about to die. The jury found for her and with help from friends who raised money for her she was able to pay her legal costs and keep the business going in Sackville Street in her own name.⁴⁴

In 1889 a tragedy occurred in Dublin, which was widely reported locally and in the British photographic journals. Thomas Bewley of Bewley, Webb, & Co., shipbuilders, manufacturers, and importers, imported and manufactured gases. Bewley supplied hydrogen and oxygen to places of public entertainment 'to make a powerful light'. The gases were also used with lantern slide projectors. The correct practice was to keep the gases separated, hydrogen in bottles painted red, oxygen in bottles painted black. Bewley broke this rule when, temporarily short of black bottles, he put oxygen into a red bottle and sent it to Chancellor's of Lower Sackville Street on 27 December. Chancellor's were told of this expedient and eventually on

15 January returned the bottle unused to Bewley. Lawrence's of Dublin then ordered bottles of hydrogen and oxygen from Bewley. Forgetting that the red bottle contained oxygen Bewley put in a small quantity of hydrogen into it to bring it up to the required pressure. This bottle, now dangerous, was supplied to Lawrence's and brought out to 'a magic lantern show at Naas'. Mr Lang, Lawrence's employee, was the projectionist who attempted to use the contents of the bottle to make limelight:

He attached it to the hydrogen pipe and applied a light. An explosion took place blowing off a pipe of the lantern and blowing out a candle. He tried to light it again, and there was another explosion. He got a new cylinder and went on with the entertainment.⁴⁵

Lang labelled the bottle 'mixed gases' and reported this to Lawrence who wrote to Bewley stating that 'an accident might happen' with the bottle and its contents. It was returned to Bewley who should have released the contents into the atmosphere. Instead, he appears to have attempted some other procedure in a room in which 'a branch of gas lighted'. At 4.25 p.m., on 28 January, an explosion was heard at Bewley's premises and on investigation it was found that Bewley had been killed instantly.⁴⁶

On 20 May 1891 the Irish Times announced: 'Serious fire in Westmoreland Street, Lafayette's photographic studio burned'. The business of Lafayette was confined to the upper portions of the house and it was there that the fire originated in a workroom attached to the photographic studio. Five persons were on the premises when the alarm was raised at 2 a.m. by a Miss O'Connor, Lafayette's

housekeeper. James Walsh, manager of Graham's pharmacy on the ground floor, unfortunately 'burst in the door of the room' in which the fire blazed, and, having released 'a fierce volume of smoke', probably caused the spread of the fire. The five persons on the premises escaped or were rescued but two firemen died as a result of an accident with an old 'fire escape' brought to the scene by the firemen. The fire probably spread also because of the 'quantity of woodwork and other inflammable material in the place'. At 4 a.m. 'the flames were still burning in the roof, which had been completely destroyed'. Rooms on the third and fourth storeys were gutted by fire 'very rapidly' but the photographic galleries at the rear of the Lafayette premises 'escaped almost uninjured except by water':

Enormous quantities of water poured through the handsomely furnished drawing rooms in nos. 30 and 31 occupied by Messrs. Lafayette, and irretrievably damaged the expensive fittings and magnificent photographs with which the rooms were decorated.⁴⁷

Lafayette's in Dublin did work for their other branches in Britain and as a result employed 'a large number of hands'. There was the possibility that the staff there might be put out of work, but a news item and an editorial in the Irish Times made it clear that 'their large number of assistants' would continue in employment.⁴⁸

5. Visitors to Ireland, 1842-1900

From the earliest days of photography photographers came to Ireland and photographed the countryside and its inhabitants. Almost without exception those who came were enthusiastic amateurs who toured scenic areas and photographed in order to have mementoes of their stay in

Ireland or made photographs for exhibition and competition. Some photographers wrote about Ireland's scenic beauty and occasionally, particularly in the 1890s, articles were illustrated with photographs. One exception to this pattern was Payne Jennings, an outstanding professional photographer, who first came to public notice in the 1870s as a photographer of the scenic beauties of Ireland. Later he went to live and work in London where he exhibited successfully and published a number of books illustrating areas of natural beauty in England.⁴⁹

The first amateur photographer to come to Ireland was Henry Brewster, son of Sir David Brewster of Scotland. He was stationed with the 76th Regiment at Newry, Co. Down, in July 1842. When he went home on leave to St. Andrews he learned the calotype process of photography from his father. On his return to Ireland he took a number of photographs at army barracks in Cork, Buttevant, and Fermoy. At Cork he photographed the guardroom, at Buttevant houses with snow on the ground near the barracks, and at Fermoy the army barracks. He also photographed the officers of the 76th Regiment at Cork barracks and he took nine other individual portraits of men in the regiment, which were almost certainly taken in Ireland. Brewster included views of Irish barracks in letters sent home to his father in Scotland.⁵⁰

In the early 1850s Ireland was visited by a number of photographers from Britain. The professional photographer Philip H. Delamotte took photographs in Dublin in 1853. He took a number of views at the international exhibition: the north side of the central hall, the central hall, and the machinery court. He also took five 'Irish antiquities' studies and a study entitled 'Fresh Dublin Bay Herrings'.

Delamotte's work was done by the wet-plate process and was exhibited in London in the first exhibition of the Photographic Society. British amateur photographers also came to Ireland in the early 1850s, probably in 1853, and took topographical and antiquarian views. Alfred Rosling, the first treasurer of the Photographic Society of London, also used a camera in Ireland and in 1854 exhibited two calotype works entitled: 'The Gap of Dunlow'(sic) and 'Muckross abbey, Killarney'. In 1854 T. Cadby Ponting exhibited a number of Irish studies in London: 'Joyce's Monument, Ireland', 'Abbey of Innisfallen', 'Refectory, Innisfallen', 'The Salmon Leap', and 'Bank of the Lake, Killarney'. He worked the calotype process. Three other British photographers showed Irish subjects in 1854: Hugh Welch Diamond, 'Rock scene, Lake of Killarney'; F. W. Berger, 'An Irish Mendicant'; Peter Wickens Fry, 'Glenade, County Leitrim, Ireland'. It is possible that Rosling, Diamond, and Ponting came to Ireland together and worked in Killarney at the same time.⁵¹

T. Cadby Ponting returned to Ireland again and photographed at Bantry, Glengariff, and Keighmaneigh. He had abandoned the calotype process, and now used the wet-plate process, examples of which he exhibited in London early in 1856. His Bantry locations included the following: 'Bantry Bay with natural clouds', and two views of Donemark Hill. The frame containing the latter also included 'Mill wheel and brambles' and 'Mill wheel and ferns' which, though not named as being at Irish locations, probably were taken near Bantry. Ponting also showed four views at Glengariff all of which were scenes on rivers or at bridges. Another set of photographs included three views at Donemark near Bantry, and one view at

Keighmaneigh.⁵²

In the 1860s photographers continued to come to Ireland. R. H. Kinnear took a series of views in Ireland, possibly confined to northern Ireland. His series included 'many subjects of historical interest' and subjects of 'scientific interest' such as the Giant's Causeway, and other views 'round the Antrim coast'. A reviewer of Kinnear's work felt that his photographs would encourage a 'strong desire' in the viewers to see the scenes for themselves. R. Vervega came to the south of Ireland, probably in 1867, and photographed in the Clonmel area. He found Ireland to be picturesque:

All that I have to say to the photographic artist is that Ireland, although said to be infested with sedition, embraces much pictorial grandeur and beauty ... Let me, therefore, inform the landscape photographer that the singular wildness and peculiar character of Irish landscapes will repay him for a visit to 'Erin's Isle', and her fair daughters will fully satisfy the ideas of portrait photographers.⁵³

Vervega photographed in and near the demesnes of Curraghmore, Newtown Anner, Lismore Castle, and in the Comeragh Mountains. On one occasion he placed his camera with tripod in the centre of a stream but the current was too strong and photographer and equipment were 'precipitated into the water'. Vervega photographed the local peasantry, and his host, a local landlord, John Palliser, surprised the peasantry when he 'presented each of them with his own photograph'. He also visited Knocklofty, the seat of the earl of Donoughmore, Kilmanahan Castle, and the village of Ardfinan. He completed his tour by staying with the monks at Mount Melleray and 'presenting them with a few large photographs'.⁵⁴

In the 1870s, Killarney continued to be an attraction for photographers. St. Vincent Beechey explored Killarney and discovered difficulties that photographers should avoid. He warned them not to walk on long dusty roads confined on both sides by walls. He had walked on such a road in Killarney 'in search of the borders of the lake' and his excursion had been in vain. He discovered that 'private grounds skirt all the borders of the lake' and that one unbroken wall enclosed the whole Muckross estate from the Lake Hotel to the Old Weir Bridge. Torc Mountain 'covered with fern and bracken' presented a barrier of a different kind. Even if one paid one shilling to enter Muckross estate one was confined to 'the regular road and walks'. He warned photographers that the scenery was 'much more beautiful to the eye than in the camera'. Distant mountains would sink into 'comparative insignificance' on the photographic plate, he warned. Beechey had experienced sultry weather at Killarney and it did not suit photography. He complained that a 'perpetual haze covered all the mountains'. Torc waterfall was short of water when he was there and he decided to 'give a day to Muckross Abbey'. Even there the 'crowds of merciless tourists ... walk in front of the camera or its field of view perpetually'. Beechey had the same problem at Ross Castle 'even more strongly'. The use of a boat was essential to photograph lake scenery but all boats for hire belonged to the hotels, and their owners were interested only in bringing parties to the 'regular tourist objects'. There was a set journey on the lakes and one 'may not detain the boats' for photography. Beechey was able to secure the use of a boat for himself through the kindness of the 'good chaplain at Muckross and of Mr. Herbert, jun.' of Muckross

House. As a result he was able to explore the photographic potential of the upper and lower lakes at Killarney.

Beechey found the Gap of Dunloe to be 'a very ordinary mountain pass' but found 'some wild and grand scenery' on Mangerton Mountain. He estimated that the Killarney area could be explored by a photographer in about one week.⁵⁵

In the 1870s a number of other articles which promoted Ireland as a tourist area and offered advice on photography appeared in the photographic press. In 1878, the year of the British Association meeting in Dublin, Wicklow was recommended as a locality which could be reached 'with the least possible amount of travelling or of personal discomfort'. Bray was recommended as 'the headquarters of the nomadic artist who desires to do a week's photographing amid scenes which, for the extremes of grandeur and quiet sylvan beauty, it is almost impossible to find anywhere'. It was reported that there was little evidence among the photographic print sellers in Dublin that Wicklow had been photographed. The area was ripe for a 'band of amateurs' who, working 'for pleasure alone', would have time to devote to discovering and photographing 'the numerous scenic gems in which the locality abounds'.⁵⁶

One year later, another article in The British Journal of Photography indicated the photographic potential of a tour around the west coast of Ireland starting in the south-west. In the Shannon estuary, Charles Pearson, junior, who travelled with a companion, attempted to photograph two men in a currach who had come alongside their ship to sell crab and lobster. Pearson could not envisage 'a lighter or frailer craft' than the currach and was very impressed that when both men pulled on the oars 'it fairly skimmed over the water'. He also photographed

an encampment of soldiers on the river bank. He was impressed by the city of Galway but was unable to stay for a prolonged visit as he wanted to travel on a paddle steamer on Lough Corrib. Pearson noted that Galway had, architecturally speaking, 'continental' and Spanish characteristics. At Cong he was followed by bare-footed and bare-headed children when he appeared from his hotel 'with a mounted camera on the shoulder'. Having photographed in Cong, he travelled by mail car to Westport where he photographed in Lord Sligo's demesne. On leaving the estate a gatekeeper informed Pearson and his companion 'that photography was not allowed in the grounds' and accused the pair of deception in bringing in their photographic apparatus 'packed in the cases'. Pearson found Ballina 'uninteresting', but, having moved to Sligo, found Lough Gill 'equal to Killarney and of very similar character, well-wooded surrounding hills, and studded with numerous picturesque islands'. Pearson's camera was 'frequently employed' at Lough Gill. He began his return journey by boat from Sligo to Liverpool, and attempted to photograph 'an old Irish woman ... knitting on deck' under the pretence of photographing a view, but 'she moved away guessing what I wanted'.⁵⁷

Arthur Conan Doyle came to Ireland in the summer of 1881 to visit relatives of his mother at Lismore, County Waterford. He travelled with three companions. Of the four, three were interested in the 'black art' of photography and the fourth 'carried with him his cardboard and paints'. Doyle described the photographic equipment which he used in Ireland:

There was little trouble about our kits. With my old camera and five dozen trustworthy plates, with enough

pyro., &c., to do a little test developing, should I wish, I was fully equipped for the campaign. I had a light tripod stand with ball-and-socket joint for outdoor work on the land, and an ordinary tripod for all other exigencies. Some of my companions were more ambitious in their preparations, but still the total amount of luggage was not a very formidable one.

The clerk at Thomas Cook's informed Doyle and his companions that he had not sold many tickets to Ireland that year and reminded them 'that there was little inducement for the Saxon tourist' to go to Ireland unless he wanted 'his head battered' or to be 'tampered with by the down-trodden Clann-na-Gael'. During 1881 Doyle had been aware of newspaper reports from Ireland about 'midnight visits, maimed cattle, half-murdered bailiffs, and ruined landlords'. These reports did not discourage him but 'rather served to inflame our fanatical photographic propensities than to allay them'. Doyle humorously saw the possibility of taking a 'glorious vista of character portraits' in Ireland: an assorted set of samples of 'the foineest pisant in the world', a rack-rent or 'lack-rent' landlord in a state of 'bloated impecuniosity', and an agent, or, 'as much of one as the aborigines had left together'. In still-life work he would photograph 'the ruined homestead, the caretaker's hut, and other signs of the times'.

Doyle and his companions landed at Dublin. In Dublin Bay they 'expended a few plates upon the scene' but Doyle was not impressed by Dublin Bay 'from the seaside', not finding it picturesque. He spent six hours in Dublin 'rambling over the Irish metropolis, and was surprised at 'the civility we met with and the order of the streets'. The city was 'quiet enough', he noted, but he saw potential

trouble in 'big hulking fellows lounging about' unemployed and known as 'corner boys'. Doyle does not seem to have taken photographs in Dublin. A day later he was in Waterford and the group 'rambled with our cameras over the old town'. All members of the group photographed a site supposed to have been associated with 'the first potato planted upon Irish soil', though Doyle was aware, being an 'ardent potatophagi', that Youghal would have had a stronger claim. The group travelled by rail to Youghal where a yacht was available for their use. Youghal was photographed from the yacht and 'several excellent views' were produced. It was more difficult to photograph from a yacht than 'the broad deck of a steamer' and there were some photographic failures. On land at Youghal 'a series of views of the antiquities' was successfully taken. At Ardmore on the Waterford coast Doyle photographed the local peasants who looked on with 'much interest and delight'. Several views were taken of the round tower at Ardmore before the group returned to Scotland.⁵⁸

In the 1880s an increased number of British tourists, including photographers, came to Ireland. Photography was less complicated in the 1880s with the introduction of the dry-plate process and it became a more popular pastime. There were also a number of improvements at British ports which allowed greater numbers of tourists to be carried: a new harbour at Holyhead in 1880, the Ramsden dock at Barrow in 1881, and a new station at Fleetwood in 1883. Faster trains and steamships were used and it became possible for the traveller to leave London, Leeds, or Manchester after 4 p.m. and reach Belfast or Dublin the next morning.

Photographers who came to Ireland wrote about their experiences in photographic periodicals. L. Macdona came

to Cork and Kerry in 1881 and was very enthusiastic about a tour of Bantry, Killarney, and Glengariff. Some years later Henry A. Francis was a prize-winner in a competition organised by The Amateur Photographer, and four of his photographs taken in Kerry were published. (plate 159). John Day came to Ireland in May 1884 and explored Cork, Crosshaven, and Blarney for photogenic subjects. He then moved westwards to Macroom, Gougane Barra, Glengariff, and Killarney. Adolph W. Beer of Birkenhead toured in Ireland in September 1884. Using Dublin as a starting point he went on tour to Bray, Glendalough, and Rathdrum, and returned to Dublin. He then set out by train to Kildare, Monasterevan, Thurles, Cashel, and returned to Dublin. In September 1885, J. Alexander Forrest photographed in Derry.⁵⁹ These tours were reported in detail to the readers of The British Journal of Photography or The Amateur Photographer and in this way the tourist and photogenic potential of Ireland was publicised.

In the 1890s the interest in Ireland persisted. From about 1890 Irish railway companies made a special effort to publicise the scenic routes served by their lines. The railways serving Queenstown, Rosslare, Kingstown, Greenore, and Larne, had direct access to the quayside for passenger convenience. Photographers seem to have taken a special interest in the north of Ireland for a number of reasons: it was accessible from Britain by the short Larne-Stranraer sea journey, it had a number of local lines in scenic areas, Belfast to Bangor and Derry to Buncrana, and it was publicised in the 1890s in a number of articles in photographic periodicals. Correspondents also offered suggestions or made enquiries about the most scenic areas there. Mrs. M. E. Marriott of Liverpool took first prize

in a lantern slide competition with a view, taken near Ballyshannon, entitled 'Rosscat, County Donegal'. Her slide was published in The Amateur Photographer. Ireland, with some emphasis on the north, continued to be publicised by articles in the photographic press. In the autumn of 1892 articles entitled 'County Down' and 'County Antrim' were written under the pseudonym 'C. E. S.' In 1896 S. L. Coulthurst of Manchester, in the series 'Picturesque Spots' in The Amateur Photographer, wrote an article entitled 'The Antrim coast road and Cushendall'. It was illustrated by five photographs. (plate 160). In the second half of the 1890s, in a series in the same journal entitled 'Tourist and half-holiday notes', Ireland was mentioned in short articles on a number of occasions: western Ireland (1896); Belfast and the north of Ireland, Co. Down, and the Dublin and Bray area (1898); Belfast and the Boyne Valley (1899). In 1900 in a later series of articles called 'The tourist', the areas of Galway and Mayo, Youghal, Belfast, and Dublin and the south of Ireland were recommended to photographers. In July 1900 Howard Esler visited the Sligo-Fermanagh region on a photographic tour. He illustrated his article with photographs from the Marble Arch area, Lough Erne, and Glencar Lough.⁶⁰

When the dry-plate era in photography began about 1880 those who changed to the new process no longer needed the portable dark tents formerly required for coating and developing plates in the field, but they did still need access to a darkroom in which they could load plate-holders with commercial dry-plates. In May 1888 The Amateur Photographer listed towns in which 'darkrooms have been placed specially at the disposal of readers'. Dungarvan was the first Irish town so listed. Youghal was added to

the list in July. The following year, two darkrooms were available in Dublin to The Amateur Photographer readers who might come to the city. Applicants 'for introductions to owners of darkrooms' were required to write to the editor who would send a 'card of introduction' to the applicant and a 'card of advice' to the owner of the darkroom.⁶¹

By May 1890 The Amateur Photographer register of darkrooms had been subdivided into four types based on ownership: amateur, dealer or professional, hotel, and photographic society. There were ten darkrooms listed for Ireland: Belfast (1); Dublin (4); Macroom (1); Mallow (1); Waterford (2) and Youghal (1). Most of these were located on the premises of photographic dealers, but those at Mallow and Macroom and one in Dublin were located in hotels. As the 1890 photographic season progressed additions were made to the list. Two photographic societies offered darkroom facilities in Belfast and hotels at Glenarm and at the Giant's Causeway also joined the scheme. Other darkrooms were listed, dealers' at Larne and Waterford, and an amateur-owned darkroom at Kingstown, County Dublin. A hotel in Ennistymon, Co. Clare, also had a darkroom in the 1890 season. The owners of all the above darkrooms renewed their membership of the scheme for the 1891 season. Articles in photographic journals occasionally referred to the location of darkrooms in Ireland: Hayes's of Grafton Street and Mason's of Dame Street, Dublin; Lizar's of Victoria Street, Nicholl's of High Street, and Hogg's of York Street, Belfast; 26 Dominick Street, Galway; the Rhine Studio and the Devonshire Arms Hotel, Youghal.⁶²

British photographers who came to Ireland in the 1880s used a variety of shipping services and ports. Charles

Pearson, junior, travelled from Liverpool to Limerick on a cargo boat, and having photographed in Ireland from Limerick to Sligo, took a return journey from Sligo to Liverpool around the north coast of Ireland. 'We had plenty of company not to mention cattle', he observed. A visitor from London who praised the suitability of Dublin and Wicklow for the photographer wrote about the closeness of London to Dublin:

Dublin is easy of access from Euston and other railway stations. One may start from London in the evening, and at seven o'clock next morning be in that famous old city and within an hour's railway journey of the scenes we have faintly endeavoured to depict.⁶³

In 1881, Arthur Conan Doyle, whose visit has already been described, bought a single ticket in Edinburgh for a railway journey to Glasgow and a boat journey from there to Waterford, 'touching at Dublin' on the way. The ticket cost 'well under a pound', and he suggested to readers from London that the London-Waterford part of the return journey connecting London-Waterford-Glasgow 'would be even less'.

In 1881, L. Macdona was given a pass by the owners of an American liner to travel from Liverpool to Queenstown, Co. Cork, 'and back'. Macdona left Liverpool at 1 p.m. and arrived at Queenstown at 10 a.m. the next morning. In 1885, J. Alexander Forrest sailed from Liverpool to Derry, setting out at 3 a.m.. The journey took eighteen hours.⁶⁴

Photographers who came to Ireland in the 1880s and 1890s used a variety of modes of transport within the country. At Cork, Macdona paid £1. 2s. first class for the journey to Killarney via Glengariff. Macdona was pleased with the price which he called 'exceedingly moderate' as it included 'cars from Drimoleague' beyond which there was no

rail service. At Bantry he set out to explore on 'one of those delightful outside Irish cars'. In 1884, Adolph W. Beer, having travelled from Liverpool to Dublin, took an 'Irish low-backed car' to Harcourt Street railway station where he boarded a train for Bray, Co. Wicklow. At Bray, Beer came to a 'satisfactory understanding with a carman for the day's drive'. He found the Irish jaunting car 'not only delightfully easy riding, but also, reasonably cheap travelling'. In 1885, John Day was able to explore Cork harbour by travelling 'down the river to Queenstown' on a steamer. Later he travelled to Macroom by rail and from there by 'Irish jaunting car' to Glengariff forty miles away.⁶⁵

Photographers were occasionally recommended to walk, one writer advising a walk from Bangor, County Down, 'over the hills about six miles to Newtownards'. From there the 'long car' could be taken to Grey Abbey on Strangford Lough. The same author, writing about exploring Co. Antrim, stated that 'the best way to see the country is to go by train to Portrush, thence by the splendid coast road to Larne, and thence by train to Belfast'. A circular ticket for train and car could be had for £1, but the author recommended walking the coast road or taking a 'special car' for a group so that 'one can stop where one chooses to photograph'. At Portrush he advised taking 'the electric tram direct from the station to the Giant's Causeway'. In 1898, a lady recommended 'a very pretty run' she had made on the bicycle from Newtownards to Grey Abbey. The ruins of the abbey were 'a splendid subject for the amateur photographer'. She recommended making the return journey 'on the cycle' via an alternative 'beautiful coast road'.⁶⁶

In the 1890s, articles in journals about photographic locations in Ireland became more specific about times, railway stations, ports, and travel costs. One writer recommended 'the new route via Stranraer and Larne'. The visitor would leave Euston station at 8 p.m. and arrive in Stranraer at 6.30 a.m.. The channel crossing time was two hours and the visitor would arrive in Belfast at 9.10 a.m.. A third class ticket and cabin return cost £2. 5s. 6d.. Four years later S. L. Coulthurst recommended visitors from England to travel via Liverpool or Fleetwood to Belfast, 'the steamers being large and of first-class order, and doing the journey in about nine hours at very moderate cost'. In August 1897 the South London Photographic Society came on 'a visit of eight full days duration' to Co. Antrim. The cost to each excursionist 'including railway fare, first class board and lodging at good hotels en route, and seat on vehicles for numerous drives' was £5. 7s. 6d.. This excursion was led by Howard Esler who some years later, in July 1900, took a party over to Enniskillen and Sligo. The party set out from Euston station at 6.30 p.m. for Holyhead, then travelled by steamer to Greenore, and then by train to Enniskillen via Dundalk junction. In 1900 The Amateur Photographer gave details of a suggested six day excursion in northern Ireland, a circular journey 'from Belfast to Belfast', exclusive of steamer return ticket from England. The cost was £3. 11s. 0d.. A six day excursion was also suggested for Dublin to Cork and Killarney, the 'Dublin to Dublin' ticket costing £4. 0s. 6d..⁶⁷

The photographers who came to Ireland in the nineteenth century were primarily interested in photographing landscapes, seascapes, and antiquities.

Nevertheless on rural excursions they met Irish country people and saw rural poverty. When in July 1881, Conan Doyle sailed into Ardmore Bay and went ashore in a dinghy 'taking, of course, our cameras with us', he found that

The people were a kindly, simple race, and looked on with much interest and delight while we took views of their houses and of their wives and families. They seemed to be in the last depths of poverty, but cheerful and cleanly, and very busy making ready for a descent of sprats which was expected every day.⁶⁸

The same summer L. Macdona left Drimoleague heading westwards for Glengariff. He saw rural slums:

We ascended on the drag and bowled away at an excellent pace, through a wild and picturesque country, dotted at frequent intervals with peasants' huts of the most wretched description, mere mud huts, like pigsties, with a hole in the thatch for a chimney. We noticed one or two miserable inmates with scarcely a stitch of clothing on.⁶⁹

In 1900, Esler came with a party of photographers to the Enniskillen-Sligo area, and photographed 'the Irish peasantry'. He found 'the little bare-footed girls and boys working in the peat-bogs by the road side'. They were shy at first but could be gently bribed with a penny to 'enter into the fun of having their portraits taken'. Esler and his party, coming down to the coast from Knocknarea, Co. Sligo, were impressed by the country people they met:

The peasant in the cottages we passed on the way were all so hospitable and pleasant; it was a treat to talk to them, and several were quite distressed if we offered remuneration for any refreshment we had.⁷⁰

The most successful British photographer to come to

Ireland was undoubtedly Payne Jennings. He worked for Cranfield's in Dublin as a senior cameraman and about 1868 moved to Galbraith's of High Street, Belfast. About 1870 'his first success was scored in Ireland' when a series of photographs of Killarney was published. They attracted universal attention 'by their freshness and novelty of style'. By 1871 he had developed a reputation as a landscape photographer and attracted the notice of a reviewer in London:

The pictures exhibited by Mr Payne Jennings were greatly admired both on account of their subjects and treatment. One in particular, 'The Middle Lake, from Dinis Island' was very fine.⁷¹

In Dublin the following year, Jennings showed 'a large number of Irish views' which were described as 'very fine and well selected'. In 1875 he published a series of photographs entitled Photographic views of the English lakes. These were reviewed very favourably in The British Journal of Photography. The reviewer spoke of the 'uniformity of excellence' in the photographs. The locations photographed included Grasmere, Buttermere, Rydal Water, Ullswater, and Derwentwater. By 1876, Jennings was exhibiting at Philadelphia. His work there was described as 'the wonderful landscapes of Mr Payne Jennings, Dublin'. By October 1878, Jennings seems to have established a base in West Dulwich while earlier the same year he had advertised for 'a youth to assist in the photographic business' in Rathmines, Dublin. The year 1878 may therefore be the year in which he made the transfer to London. Jennings's reputation was now high. He told the Edinburgh Photographic Society that he had been commissioned to illustrate 'several of the poets' with

photographs from nature, and that 'my people are at present busily engaged in printing four or five thousand of these little views'.⁷²

Jennings continued to exhibit. In 1878 his work was 'entitled to the highest praise'. He showed a 'frame of views in Ireland' which were 'exquisite specimens of the art'. One reviewer noticed in particular 'the beauty and naturalness of the clouds' in Jennings's work. He also showed work taken in the English Lake District, and two 'frames of photographs mounted as, and intended for, book illustration'. In 1879, Jennings exhibited work using both the wet-plate and dry-plate processes, at the end of the decade when the dry-plate method was still somewhat experimental. He was praised for his 'patiently-watched moments of natural study embodied in the English and Irish scenery, which [he] could only have caught in transient passages of light and atmosphere'. Jennings also exhibited Christmas cards which bore tasteful selections 'from some of the best bits from his landscapes'. The cards were expected to have 'a large degree of popularity'. In 1882 he exhibited only three photographs at the Photographic Society's annual exhibition. But for these exhibits being hors de competition 'they most probably would have received a medal'. At the same time as working and exhibiting in Britain, Jennings also made formal communications to photographic societies, a number of which were published: 'Landscape work and its relation to art' to the Edinburgh Photographic Society in 1878, and 'Art photography' to the Photographic Society of London in 1881. In 1881 he also wrote a brief critical note on 'The quality of gelatine negatives' at a time when there was much experimentation with gelatine. In April 1884, he was chosen to be included

in a series in The British Journal of Photography in which a portrait and short appreciative note of personalities in photography were regularly published. He was chosen for a number of reasons: his novelty of photographic style, technical knowledge, and artistic taste. His skill as a judge at photographic exhibitions and his role as an executive in three photographic societies were also recognised.⁷³

In the 1890s, Jennings was involved in the publication of a number of guide books to tourist centres in England. He had explored the Norfolk Broads in the late 1880s and by 1891 one hundred of his photographs in halftone were published in a volume published by the Great Eastern Railway company. A third edition was published in 1898 with letterpress description by E. R. Suffling. A reviewer praised Jennings and the railway company for taking the 'fullest advantage of the camera for making known the beauty, the reposeful charm, and the quiet fascination of the land of English lagoons'. In 1895 Summer holidays in north-east England was published. It was illustrated by 173 photographs taken by Jennings and the work included descriptive letterpress by Constance Cotterell.

Photopictures in East Anglia appeared in at least two editions at the end of the century. It consisted of over one hundred plates by Jennings and descriptive letterpress by Annie Berlyn.⁷⁴

APPENDICES

Appendix A

Source: Census Ire., decennial censuses, 1861-1901; for full references see W. E. Vaughan and A. J. Fitzpatrick (ed.), Irish historical statistics. Population, 1821-1971 (Dublin, 1978), pp 355-7.

Professional photographers in Ireland, provincial and national totals, 1861-1901

	1861	1871	1881	1891	1901
Leinster	62	122	150	280	314
Munster	17	43	72	72	103
Ulster	19	68	83	176	234
Connacht	3	10	9	19	26
Total	101	243	314	547	677

Appendix B

Source: Census Ire., for full ref. see above, ii, p. 143.

Professional photographers in Ireland, in cities and counties, 1861-1901

Counties and towns	1861	1871	1881	1891	1901
Carlow	0	0	4	2	3
Dublin city	52	83	90	185	191
Dublin	4	20	27	60	71
Kildare	2	4	4	11	13
Kilkenny	1	5	6	6	6
King's County	1	0	2	0	3
Longford	0	3	0	0	0
Louth	0	3	5	2	4
Meath	1	1	1	2	5
Queen's County	0	0	3	5	2
Westmeath	1	1	3	0	4
Wexford	0	2	2	7	6
Wicklow	0	0	3	0	6
Clare	1	1	5	3	3
Cork city	4	11	20	27	28
Cork	2	7	11	9	22
Kerry	2	5	6	6	8
Limerick city	5	5	7	9	17
Limerick	0	3	0	1	2
Tipperary	3	4	16	8	10
Waterford city	0	-	5	7	13
Waterford	0	2	2	2	0

Appendix B (cont.)

Professional photographers in Ireland, in cities and counties,
1861-1901

Counties and towns	1861	1871	1881	1891	1901
Antrim	0	3	6	14	14
Armagh	0	6	8	15	9
Belfast	9	32	32	78	150
Cavan	2	1	1	4	4
Donegal	1	1	1	5	6
Down	2	11	5	22	18
Fermanagh	0	1	2	3	3
Londonderry	4	14	20	21	22
Monaghan	1	0	4	4	2
Tyrone	0	2	4	10	6
Galway	1	4	5	6	8
Leitrim	1	1	1	1	2
Mayo	0	3	0	6	11
Roscommon	1	2	2	3	2
Sligo	0	0	1	3	3

Appendix C

Source: Census Ire., for full ref. see above, ii, p. 143.

Female professional photographers in Ireland, provincial and national totals, 1861-1901

	1861	1871	1881	1891	1901
Leinster	5	24	40	115	131
Munster	2	6	13	14	24
Ulster	0	3	9	37	69
Connacht	0	1	0	3	4
Total	7	34	62	169	228

Appendix D

Source: Census Ire., for full ref. see above, ii, p. 143.

Female professional photographers in Ireland, in cities and counties, 1861-1901

	1861	1871	1881	1891	1901
Counties and towns					
Carlow	0	0	1	0	1
Dublin city	5	19	27	86	96
Dublin	0	3	8	23	24
Kildare	0	1	0	2	5
Kilkenny	0	0	1	1	1
King's County	0	0	0	0	0
Longford	0	0	0	0	0
Louth	0	1	0	0	1
Meath	0	0	0	0	1
Queen's County	0	0	2	2	1
Westmeath	0	0	0	0	0
Wexford	0	0	1	1	0
Wicklów	0	0	0	0	1
Clare	0	0	0	0	0
Cork city	1	2	8	9	6
Cork	1	3	1	0	2
Kerry	0	0	0	1	3
Limerick city	0	0	0	0	0
Limerick	0	0	0	0	6
Tipperary	0	0	2	1	0
Waterford city	0	-	2	3	7
Waterford	0	1	0	0	0

Appendix D (cont.)

Female professional photographers in Ireland, in cities and counties, 1861-1901

Counties and towns	1861	1871	1881	1891	1901
Antrim	0	0	0	2	3
Armagh	0	0	0	5	1
Belfast	0	2	5	23	54
Cavan	0	0	0	0	2
Donegal	0	0	0	0	1
Fermanagh	0	0	0	0	0
Londonderry	0	0	3	4	5
Monaghan	0	0	1	2	2
Tyrone	0	0	0	0	0
Galway	0	1	0	2	2
Leitrim	0	0	0	0	0
Mayo	0	0	0	0	1
Roscommon	0	0	0	0	0
Sligo	0	0	0	1	1

Appendix E

Professional photographers in Ireland, classified by religious affiliation, 1861-1901

Census Ire., 1861

Source: for full ref. see above, ii, p. 143.

		R.C.	Prot.	Pres.	Meth.	Others
Leinster	62	22	34	4	2	0
Munster	17	4	10	0	3	0
Ulster	19	7	8	2	0	2
Connacht	3	1	2	0	0	0
Total	101	34	54	6	5	2

Census Ire., 1871

Source: for full ref. see above, ii, p. 143.

		R.C.	Prot.	Pres.	Meth.	Others
Leinster	122	61	40	6	3	12
Munster	43	20	17	1	1	4
Ulster	68	14	27	21	4	2
Connacht	10	6	4	0	0	0
Total	243	101	88	28	8	18

Census Ire., 1881

Source: for full ref. see above, ii, p. 143.

		R.C.	Prot.	Pres.	Meth.	Others
Leinster	150	78	57	6	1	8
Munster	72	41	21	2	3	5
Ulster	83	13	40	22	5	3
Connacht	9	7	2	0	0	0
Total	314	139	120	30	9	16

Appendix E (cont.)

Professional photographers in Ireland, classified by religious affiliation, 1861-1901

Census Ire., 1891

Source: for full ref. see above, ii, p. 143.

		R.C.	Prot.	Pres.	Meth.	Others
Leinster	280	144	115	10	3	8
Munster	72	42	22	5	1	2
Ulster	176	22	54	65	16	19
Connacht	19	13	5	1	0	0
Total	547	221	196	81	20	29

Census Ire., 1901

Source: for full ref. see above, ii, p. 143.

		R.C.	Prot.	Pres.	Meth.	Others
Leinster	314	179	107	12	5	11
Munster	103	72	21	5	1	4
Ulster	234	31	86	82	16	19
Connacht	26	19	5	1	1	0
Total	677	301	219	110	23	24

Appendix F

Census of Ireland, 1871, corrected Ulster and national totals
(photographers)

These census totals for 1871 have been compiled, used, and made available to deal with an error in Census Ire., 1871: Part I, area, houses, and population ..., vol. iii, province of Ulster, H.C. 1874, lxxiv, Part I, 1.

Ulster, females

		R.C.	Prot.	Pres.	Meth.	Others
Belfast	2	0	0	2	0	0
Down	1	0	1	0	0	0
Total	3	0	0	0	0	0

Ulster, males

Total	65	14	26	19	4	2
Ulster total	68	14	27	21	4	2

Ireland, totals

Males	209	86	78	26	6	13
Females	34	15	10	2	2	5
Total	243	101	88	28	8	18

Appendix G

Belfast photographic studio auction, 1870.

Advertisement in the Belfast Newsletter, 18 May 1870, in which the equipment of the studio of Marcus Ward & Co., Belfast, is offered for sale by private contract or by auction. The advertisement, appearing at the end of the first decade of the carte-de-visite era, provides detailed information on the stock of cameras, lenses, and darkroom and studio equipment, used in a busy photographic studio:

Important to photographers and others

Important sale by auction of first-class photographic apparatus, furniture, and other effects; and well-constructed glass house, and a large and valuable stock of negatives. Mr Hugh Hamilton has received instructions from the proprietor, who is retiring from business, in consequence of ill-health, to sell by auction, on the premises, no. 7 Donegall Place, on Thurs. 26 day of May 1870, in lots to suit purchasers (unless previously disposed of by private contract in one lot), the whole of that large and valuable stock of photographic apparatus, consisting of carte-de-visite lens by Dallmeyer; no. 4 portrait lens by do.; no. 4 triple lens, two carte-de-visite lenses, portrait lens for a 10" x 10" camera; no. 1 triple lens by Dallmeyer; single stereoscopic lens for children, focussing glass; carte-de-visite camera and slide for no. 2 B lens by Ottowell(sic), Collis, & Co.; diamond, cameo, back, and slide for ditto., by Marion; 12" x 10" landscape camera and slide by Ottowell(sic), Collis, & Co.; 10" x 10" camera and slide, carte-de-visite camera and

slide, large portrait camera and two dark slides by Cranz; double carte-de-visite camera; enlarging camera by Parsons, Richardson, & Co.; portable camera stand; two large camera stands, by Ottowell(sic), Collis, & Co.; copying stand, baths, head rests, still, rolling machine, by H. Bury & Co.; several valuable backgrounds, both landscape and interiors; washing troughs, plate boxes, & c.; a large assortment of printing frames, including 79 1/4 plate, 23 1/1 plate, 135 carte-de-visite, 23 10" x 8", 6 15" x 12", &c., &c.; several carved oak and other tables, rustic chairs, table and flower stand, walnut cabinet, polished walnut davenport, lady's easy carved walnut chair, walnut music stand, mahogany dressing table and mirror, pedestal basin stand, a number of elegant chairs in carved oak and walnut; gothic inlaid round table, two large gothic stands for exhibiting specimens, carved oak bookcase, stained wood counter, splendid Brussels carpet, 24' x 21'; oilcloth, stair carpet, drawing-room fender and fire irons, &c.; gasalier, window blinds, cocoa mats and matting, green damask curtain, gold, oak, ormolu, and other specimen frames, carte-de-visite and cabinet, albums, &c., &c.

A large and commodious operating gallery, with glass sides and roof, 26' by 10', fitted complete with blinds on spring rollers. Also, that large and valuable stock of negatives, many of which were taken by Messrs Parks & Gedge, but the greater portion were executed by Messrs Ward, consisting of nearly 10,000 negatives and comprising most of the nobility and gentry of the north of Ireland, and a large number of clerical, musical, theatrical, literary, and other celebrities.

The whole of the above will be on view on Tuesday and

Wednesday 24 and 25 May when the negative stock book can be inspected.

Photographic Laboratory, 100 High Street, 1941
Photographic Laboratory, 100 High Street, 1941
Photographic Laboratory, 100 High Street, 1941

- Adams, E., 20 High Street.
- Adams, William, 100 High Street.
- Adams, E. J., 40 High Street.
- Adams, A., 40 High Street.
- Adams, J. E., 15 High Street.
- Adams, Harry F., 25 Royal Avenue.
- Adams Hall, 41 Little May Street.
- Adams Photo Art Co., 100 High Street.
- Adams, William J., 50 High Street.
- Adams, Oswald W., 100 High Street.
- Adams, E., 20 High Street.
- Adams, Robert, 51 High Street.
- Adams, John, 100 High Street.
- Adams, John, 100 High Street.
- Adams, E. J., 40 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams, E., 20 High Street.
- Adams, J. E., 15 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams, E., 20 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams Photo Art Co., 100 High Street.
- Adams Photo Art Co., 100 High Street.

Appendix H

Professional photographers in Belfast, 1894

Photographers in Belfast in 1895 listed in Belfast and Province of Ulster Directory for 1895 (Belfast, 1894), p. 738.

Abernethy, W., 29 High Street.

Benson, William, 30 Great Victoria Street.

Blair, R. J., 45 Donegall Place.

Buchanan, A., 83 Donegall Avenue.

Devoto, J. B., 13 Fleetwood Street.

Douglas, Harry R., 35 Royal Avenue.

Egan Mall, 41 Little May Street.

Imperial Photo Art Co., 4 Fountain Lane.

Kilpatrick, William J., 53 Donegall Place.

Massey, Oswald W., 168 Agnes Street.

M'Bride, T., 3 High Street.

Neilson, August, 51 Anne Street.

Phillips, John, 143 Royal Avenue.

Piper, Miss, 22 Castle Place.

Plimmer, T. S., 19 High Street.

Queen's Photo Art Co., 8 Royal Avenue.

Reid Bros., 81 High Street.

Sewell, J., 323 Albertbridge Road.

The Photochromatic Printing Co., Downshire Place.

The Royal Photo Art Co., 79 Royal Avenue.

The Vienna Photo Art Co., 14 Queen's Arcade.

Thompson, J., 7 Donegall Street.

Turnbull & Son, Garfield Chambers.

Welch, Robert, Irish view publishers, 49 Lonsdale Street.

Appendix I

Professional photographers in Dublin, 1894

Professional photographers in Dublin listed in Slater's and Kelly's Royal national directory of Ireland (London and Manchester, 1894), p. 250.

Alberts & Co., 13 College Green.

Armstrong, R., 70 Grafton St.

Chancellor & Son, 55 Lower Sackville St.

Cranfield, Edith, 115 Grafton St.

Dunbar, Henry, 62 Dame St.

Forbes, Robert, 54 Grafton St.

Geoghegan, Thomas F., 6 Lower Sackville St.

Glover M., 124 Stephens Green West and 9 Westmoreland St.

Gromann, ---, 31 Heytesbury St.

Hendrick, Francis, 1 Wellington Quay.

Jones, Robert, 1B Harcourt Rd.

Kennan, William R., 41 Grafton St.

Lafayette, J., 30 Westmoreland St.

Lauder Brothers, 45 Lower Sackville St. and 32 Westmoreland St.

Lawrence, W., 5, 6, and 7 Upper Sackville St.

McKee, William C., 5 Lower Sackville St.

Mansfield, A. B., 90 Grafton St.

Moore, William G., 11 Upper Sackville St.

Moran, J. W., & Co., 52 South King St.

North, Thomas, 66 Grafton St.

O'Grady, W., 14 Bachelor's Walk.

Robinson, J., & Sons, 65 Grafton St.

Sheils, Gregory, 27 Capel St. and 25 Upper Sackville St.

Appendix I (cont.)

Professional photographers in Dublin, 1894

Vance, M., 140 Stephens Green West.

Werner & Son, 39 Grafton St.

The bankruptcy of two photographers in Dublin, 1897.

The Brit. Jour. of Phot., no. 1954, xliv (Oct. 15 1897) reported the bankruptcy of two Dublin photographers:

Re Joseph Percival Crawley and Mary Crawley, his wife (trading as M. Vance, photographers, 140 St. Stephen's Green, Dublin). A circular has been sent to the creditors interested hereunder by Messrs Stewart & Orr of 33 Lower Ormond Quay, Dublin, to the following effect: 'Owing to the wet season, and depression in trade on account thereof, the above named debtors are unable to meet their engagements with their creditors, and have been obliged to obtain the protection of the Queen's bench division of the high court of justice in bankruptcy. A preliminary meeting of the creditors will however be held at which an offer of composition and a statement of affairs will be submitted'. The meeting has since been held at the offices of Messrs Kevins & Sons, chartered accountants, Dame Street, at which a statement of affairs was presented, showing unsecured liabilities amounting to £447. 19s., and preferential creditors amounting to £57. 5s. 2d.. The assets consisted of book debts, good and bad, £8. 7s., estimated to produce £3; photographic apparatus, &c., valued at £36. 18s. 1d.; studio furniture £23. 3s.; cash in hand £1. 14s. 6d.; total, £64. 15s. 7d., from which £57. 5s. 2d. has to be deducted for the claims of preferential creditors, payable in full, leaving net assets at £7. 10s. 5d.. The debtors submitted an offer of 1s. 6d. in the pound, payable by two instalments at six and twelve months, which was accepted.

Appendix K

Professional photographers in Cork, 1894

Photographers in Cork listed in Guy's city and county Cork almanac and directory for 1895 (Cork, 1894), p. 406.

Baker, H. R., 2 Winthrop St.

Berlin photographic studio, 33 Patrick St.

Guy's photographic studio, 70 Patrick St.

Honey, William G., 28 Grand Parade.

Hunter, Mrs, 28 Patrick St.

Morris, W. V., 34 Grand Parade.

O'Callaghan, W., 102 Patrick St.

St. Luke's photographic studio, Gardiner's Hill.

The Paris photographic studio, 64a Patrick St.

Appendix L

A list of Irish contributors to the Scott Archer fund set up to assist the widow and children of Frederick Scott Archer, the discoverer of the wet-plate process, who died in 1857 aged forty-four.

'The Archer fund' in The Photo. Jour., v, no. 85 (23 May 1859), pp 298-300, lists the contributors to the fund. Most Irish contributors are listed together but some are in the general list of names:

Contributors	£	s.	d.
The Photographic Society of Ireland	10	0	0
William Allen	1	0	0
John H. Aylmer	2	2	0
Messrs. Bewley & Evans	5	0	0
Samuel Bewley jun.	5	0	0
Lieut.-Col. Clarke, Royal Scots Greys	1	0	0
Lester Cleary		5	0
Sir J. J. Coghill Bt.	1	1	0
William Dalgleish	1	0	0
James Foulis Duncan		10	0
Lord Otho Fitzgerald	1	0	0
Professor Leon Glukman	5	0	0
Captain Richard Wilson Hartley	2	2	0
Captain Robert J. Henry	2	2	0
William Hodges	1	0	0
Frederick H. Mares		10	0
Ebenezer Pike	2	0	0

Appendix L (cont.)

Irish contributors to the Scott Archer fund, 1859

Contributors	£	<u>s.</u>	<u>d.</u>
Edward Roper	10	0	
Gilbert Sanders	1	0	0
Edward King Tenison	5	0	0
James Vance	1	0	0
Henry T. Vickers	1	0	0
William White	5	0	

Appendix M

Photography in local prisons in Ireland, 1865-1870

Photography in local prisons in the second half of the 1860s and in the first full working year of the habitual criminals act of 1869. Sources used include the annual reports of the inspectors-general of prisons, John Lentaigne's survey of local prisons in December 1869 as to 'whether there is a photographic apparatus in the prison or not', and the correspondence of Patrick Joseph Murray, registrar of habitual criminals. In the table below the regular use of photography is signified by the symbol 'x'.

	1865	1866	1867	1868	1869	1870
Armagh						x
Belfast				x	x	x
Carlow						x
Carrick-on-Shannon						x
Castlebar				x	x	x
Cavan		x	x	x		x
Clonmel		x	x	x		x
Cork			x	x	x	x
Derry	x	x	x	x	x	x
Downpatrick						x
Drogheda						x
Dundalk						x
Ennis						x
Enniskillen	x	x		x	x	x
Galway			x			x
Kilkenny						x

Appendix M(cont.)

Photography in local prisons, 1865-70

	1865	1866	1867	1868	1869	1870
Kilmainham	x	x	x		x	x
Lifford		x	x	x	x	x
Limerick		x		x		x
Longford					x	x
Maryborough						x
Monaghan						x
Mullingar				x		x
Naas				x	x	x
Nenagh					x	x
Omagh					x	x
Richmond	x	x		x	x	x
Roscommon		x	x	x		x
Sligo						x
Tralee						x
Trim				x	x	x
Tullamore						x
Waterford					x	x
Wexford			x		x	x
Wicklow						x

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 15. Gernsheim, L. J. M. Daguerre, passim.
 16. Saunders's Newsletter, 12 Nov. 1842; *ibid.*, 12 Aug. 1843; uncatalogued scrap book, Thomas M. Ray collection, N.L.I; Saunders's Newsletter, 26 Mar. 1844; Freeman's Journal, 3 July 1844; Dublin Gazette, 20 Oct. 1843, p. 685.
 17. Saunders's Newsletter, 19 Dec. 1844; the idea that Glukman was a Hungarian is based on oral tradition in the modern P.S.I. when the society was located in Hume Street, Dublin, in the 1940s and 1950s; it is possible that the idea may have gained authority when repeated by a distinguished member of the society, such as Thomas H. Mason of Dame Street, Dublin, who had been a president of the society before the first world war and who was alive in the 1950s and known to members of the P.S.I.
 18. Saunders's Newsletter, 8 Mar., 19 and 26 May 1845.
 19. Ibid., 19 May 1845.
 20. Ibid., 22 Nov. 1845; *ibid.*, 6 and 14 Apr. 1847; *ibid.*, 19 and 26 May 1845.
 21. Rosalind M. Elmes (ed.), Catalogue of engraved Irish portraits mainly in the Joly collection and of original drawings (Dublin, n.d.), pp 18, 126, 131, 134, 148, 157; Saunders's Newsletter, 14 Apr. 1847; *ibid.*, 22 Nov. 1845; *ibid.*, 2 Jan. 1849; Strickland, Dict. of Ir. artists, ii, p. 165.
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24. Saunders's Newsletter, 3 June 1851; *ibid.*, 12 Apr. 1852.
25. Saunders's Newsletter, 17 June 1851; *ibid.*, 21 June 1852.
26. Belfast Newsletter, 14 May 1851; *Ibid.*, 18 Aug. 1851; Arnold, Henry Talbot, pp 196-7; Belfast Newsletter, 20 Aug. 1851.
27. Belfast Newsletter, 22 Jan. 1856; *ibid.*, 11 Feb. 1856; 'The late Mr. O. Saroney' in The Brit. Jour. of Phot., xxvi, no. 1009 (5 Sept. 1879), p. 423. Belfast Newsletter, 11 July 1859; *Ibid.*, 18 Jan., 15 Feb., 20 Apr., 11 May, 8 June 1861.
28. Cork Examiner, 9 and 22 June, 4 July, 4 Aug. 1851.
29. *Ibid.*, 8, 19, 22, 24 Sept. 1851.
30. Cork Examiner, June, July, August 1856, *passim*.
31. Saunders's Newsletter, 6 July 1853; *ibid.*, 2 May 1854.
32. *Ibid.*, 6 July 1853; *ibid.*, 2 July 1858; Irish Times, 31 Mar. 1860; a whole-plate photograph of A. M. Sullivan was presented to the author by Eugene Watters, gate lodge, Cappagh hospital, Dublin; it bears a Simonton & Millard label on the reverse side with the name of the subject and the date the photograph was taken inscribed: A. M. Sullivan, 29 July 1859; S. Welford, 'The cost of photography in the period 1850-1897' in The R.P.S. hist. group newsletter, no. 45 (Jan. 1980), p. 5.
33. Gernsheim, Concise hist. of photog., pp 32-4; Saunders's Newsletter, 6 July 1853; *ibid.*, 26 Aug. 1854; *ibid.*, 13 Mar. 1855; *ibid.*, 6 May 1856; *ibid.*,

- 29 May 1857; ibid., 15 Aug. 1859.
34. Saunders's Newsletter, 20 May 1857; Irish Times, 4 April 1860; Henry Boylan, A dictionary of Irish biography (Dublin, 1978), p. 193; Saunders's Newsletter, 20 July 1860.
35. Saunders's Newsletter, 13 Mar. 1855; ibid., 21 June 1851; ibid., 6 May 1857; ibid., 21 Aug. 1861; ibid., 26 Aug. 1854; ibid., 20 May 1857; ibid., 13 Mar. 1855; ibid., 6 June 1855.
36. Gernsheim, Concise hist. of photog., pp 42-3; Saunders's Newsletter, 14 Sept. 1852.
37. Saunders's Newsletter, 13 Mar. 1855; ibid., 8 Aug. 1859; ibid., 6 May 1856; ibid., 29 May 1857; ibid., 30 Apr. 1863.
38. Saunders's Newsletter, 6 May 1856; Kraszna-Krausz Focal ency., i, p. 107; Irish Times, 7 Mar. 1861; Saunders's Newsletter, 31 July 1861; Roger Taylor, George Washington Wilson: artist and photographer 1823-93 (Aberdeen, 1981), *passim*; A. Kraszna-Krausz (ed.), The Focal encyclopaedia of photography (2 vols, London and New York, fully rev. ed., 1965), i, p. 95; Cork Examiner, 7 June 1866.
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43. Irish Times, 6 May, 10 May, 21 May, 27 May 1864; Irish Times, 1 and 2 June 1864; *ibid.*, 1 Apr. 1865; *ibid.*, 2 July 1869; 'Portraits by A. E. Lesage, Dublin' in The Brit. Jour. of Phot., xvi, no. 492 (8 Oct. 1869), p. 487; Irish Times, 15 and 23 May 1867; *ibid.*, 17 June 1867; *ibid.*, 3 Apr. 1868; *ibid.*, 16 June 1868; *ibid.*, 23 Mar. 1868.
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48. Saunders's Newsletter, 27 and 30 July 1861; Irish Times, 5 Sept. 1863; *ibid.*, 16 Apr. 1866; *ibid.*, 8 July 1863; Sir Leslie Stephen and Sir Sidney Lee (eds.), Dictionary of national biography (London, 1908), viii, p. 452; The Nation, 7 Oct. and 30 Dec. 1865; *ibid.*, 20 and 27 Jan. 1866; *ibid.*, 14 and 21 Apr. 1866; Irish Times, 5 July 1869; Belfast

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56. Thom's almanac, 1861 (Dublin, 1861), pp 1284-5, 1343, 1673; The Belfast almanac for the year of Our Lord, 1856 (Belfast, 1856), p. 13; Belfast Newsletter, 23 Apr. 1862; *ibid.*, 12 May 1851; *Ibid.*, 2 Mar. 1866.
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58. Strickland, Dict. of Ir. artists, i, pp 377-8; Irish Times, 15 Dec. 1862; *ibid.*, 2 July 1869; *ibid.*, 15 May 1873; The Belfast almanac for the year of Our Lord, 1871 (Belfast, 1871), p. 10; Belfast Newsletter, 1 June and 12 July 1895.
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61. Irish Times, 2 July 1869; *ibid.*, 5 and 6 July 1869; *ibid.*, 14 May 1870; *ibid.*, 4, 5, 11, 16, 18 May, 13 June 1871; Strickland, i, p. 168; the author has been unable to identify the London publishers who commissioned Chancellor's; Irish Times, 16 July 1878; above, i, pp 14-15.
62. Dublin Photographic Society members' names, 1854-9, N.A., M1115(2); Thom's almanac, 1857 (Dublin, 1857), p. 1078; application for copyright, Aug.- Dec. 1862, P.R.O., Stationers' hall records, nos 254, 263, 255, 297, (Copy 1/1); application for copyright, Jan.- Mar. 1863, P.R.O., Stationers' hall records, no. 491, (Copy 1/2); application for copyright, Apr.- June 1863, P.R.O., Stationers' hall records, nos 420, 525, 300, (Copy 1/3); application for copyright, Aug.- Dec. 1862, P.R.O., Stationers' hall records, nos 114, 295, 355, (Copy 1/1); application for copyright, Apr.- June 1863, P.R.O., Stationers' hall records, no. 236, (Copy 1/3); application for copyright, Aug.- Dec. 1862, P.R.O., Stationers' hall records, nos 7, 108-09, 145-6, 182-3, 257, (Copy 1/1).
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76. Carnac, loc. cit., p. 248.
77. 'New and extraordinary development', loc. cit., p. 6.
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79. Carnac, loc. cit., pp 250, 246.
80. 'New and extraordinary development in photography', loc. cit., p. 6; 'Lafayette, photographer to the Queen' in The lady of the house, iii, no. 2 (Christmas, 1892), p. 20.
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83. E. Estyn Evans and Brian S. Turner, Ireland's Eye: the photographs of Robert John Welch (Belfast, 1977), pp 4-5; Welch to Ball, 10 Jan., 10 Feb., 2 Mar. 1894 (National Museum library, art and industry correspondence, vii, 1894, 20/A.& I.); Welch to Grenville Cole, 4 Apr. 1903, (Geological Survey of Ireland, miscellaneous correspondence); 'Report of the committee ... to arrange for the collection, preservation, and systematic registration of photographs of geological interest in the United Kingdom' in Report of the sixtieth meeting of the B.A.A.S held at Leeds in September 1890 (London, 1891), p. 443; below, i, pp 174-5, refer to the use of Welch's photographs in the 1890s by the National Museum of Ireland; below, ii, pp 70-71 and ii, pp 82-3, discuss the use of Welch's photographs in geology and ethnology; the original negatives of the Welch collection are in the Ulster Museum, Belfast, and have been catalogued: Ulster Museum, A list of the photographs in the R. J. Welch collection in the Ulster Museum (2 vols, Belfast, 1979, 1983).
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Chapter 3: Amateur photography

1. Arnold, Henry Talbot (London, 1977), pp 100;
Gernsheim, L. J. M. Daguerre (New York, 1968), p. 96.
2. Arnold, Henry Talbot, p. 187.
3. Thom's almanac (Dublin, 1856), p. 1209; Graham Smith, 'W. Holland Furlong, St. Andrews, and the origins of photography in Scotland' in Jour. of the Hist. of Phot., xiii, no. 2 (April - June 1989), pp 139-40.
4. Brewster to Talbot, 7 Nov. 1841, Science Museum Library, London, Brewster correspondence; Furlong to Talbot, March 1842, Lacock collection, Talbot Museum, Lacock, Wiltshire, England, LA 42-11; Codex Brewster, circa 1841-43, the J. Paul Getty Museum, Malibu, California, photograph no. 81a; this album was offered for sale in 1983 and examined by Alison Morrison-Low of the Royal Museum of Scotland; I am grateful to Alison Morrison-Low for giving me access to her detailed unpublished notes on the contents of the album; in this work I use her pagination and numeration of the photographs in the album; Smith, 'W. H. Furlong in Scotland', loc. cit., p. 139.
5. Codex Brewster, photograph no. 63b; William Holland Furlong, 'Preparation of iodised paper by one solution only' in The Jour. of the Photo. Soc., ii, no. 28 (20 Mar. 1855), pp 135-6; Smith, 'W. H. Furlong in Scotland', loc. cit., p. 141; William and Robert

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7. R.I.A. Proc., iii (1845-47), pp 77-98.
8. Freeman's Journal, 24 August 1839; Beaumont Newhall (ed.) An historical and descriptive account of the various processes of the daguerreotype and the diorama by Daguerre (New York, 1971), p. 272; 'Photographic Society of Ireland' in The Brit. Jour. of Phot., vii, no. 113 (1 March 1860) p. 67; Lady Louisa Tenison, Sketches in the East, (London, 1846); his wife, Lady Louisa, produced a volume of drawings made on her tour of Egypt; it is not known if Tenison accompanied her with his camera on this occasion; David H. Davison, Impressions of an Irish countess: the photography of Mary countess of Rosse (Birr, 1989), p. 3; Impressions of an Irish countess: centenary exhibition of the photographic heritage of Mary Rosse 1812-1885, for which exhibition, seen at Birr by the author in August 1985, there was no catalogue.

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10. Helmut and Alison Gernsheim, Concise hist. of photog., pp 32- 3; Arnold, Henry Talbot, pp 196-7, 188-90.
11. Saunders's Newsletter, 3 June 1851; Arnold, Henry Talbot, pp 190-2.
12. Saunders's Newsletter, 6 and 8 July 1853.
13. John Sproule, The Irish Industrial Exhibition, 1853 (Dublin, 1853), pp 234-5.
14. Saunders's Newsletter, 9 and 20 May, 25 Aug. 1854.
15. Saunders's Newsletter, 14 March 1855; D.P.S. members' names, 1854-9; Saunders's Newsletter, 9 May 1854; *ibid.*, 14 March 1855; *ibid.*, 6 June 1855.
16. Fourth annual report of the Dublin Chemical Society (Dublin, 1856), p. 9.
17. D.P.S. members' names, 1854-9, in which the honorary treasurer's annotations, dated August 1856, show the register being brought up to date and many names being crossed off; Saunders's Newsletter, 3 May 1856.
18. Arthur Deane (ed.), Belfast Natural History and Philosophical Society centenary volume, 1821-1921 (Belfast, 1924), p. 119; D.P.S. members' names, 1854-9; The Jour. of the Photo. Soc., iii, no. 42 (21 May 1856), pp 52-3, 55; Gernsheim, Hist. of photog. to the mod. era, pp 584-5; The Photo. News, iii, no. 77 (24 Feb. 1860) p. 304; The Photo. News, iii, no. 80 (16 Mar. 1860), p. 342; The Photo. News, iii, no. 85 (20 Apr. 1860), p. 402.
19. D.P.S. members' names, 1854-9; Dublin Chemical Society Annual Report, 1853 (Dublin, 1853), p. 2; Fourth annual report of the Dublin Chemical Society (Dublin, 1856) p. 3; Aldridge, Cameron, and Lover were

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20. 'Monthly meeting' in R.D.S. Proc., xci (1854), p. 14; 'Photographic Society of Ireland' in The Jour. of the Photo. Soc., iv, no. 66 (21 May 1858), p. 215; 'Dublin Photographic Society' in The Liverpool Photo. Jour., ii (1st ser.), no. 15 (10 March 1855), pp 35-7.
21. 'Dublin Photographic Society', loc. cit., p. 35.
22. D.P.S. members' names, 1854-9; Charles A. Cameron, Charles A. Cameron: reminiscences (Dublin, 1913), pp 18-9; Saunders's Newsletter, 8 July 1853; *ibid.*, 20 May 1854; D.N.B., vol. viii, p. 744; D.P.S. members' names, 1854-9, the physicians on the register being John Barker, James Foulis Duncan, William Lover, Robert Spenser Dyer Lyons, Michael Harry Stapleton, and William Edward Steele; the chemists and druggists on the register are: John Aldridge, William Allen, Charles A. Cameron, Edmund William Davy, Richard Pring, and possibly James Vance.
23. D.P.S. members' names, 1854-9; R.D.S., Reports of the proceedings of the meetings held for the discussion of

- subjects connected with practical science and art, 1848-55 (Dublin, 1855), pp 121-2; Record of the great industrial exhibition, 1853 (Dublin, 1853), p. 279; Thom's almanac, 1857 (Dublin, 1857) p. 1052, the street directory entry for Alfred Nelson indicating that he was a professional photographer in 1856; Sproule, Irish Industrial Exhibition, p. 235.
24. D.P.S. members' names, 1854-9.
25. Slattery, Photography in Dublin 1839-61, appendix C, pp 133-4; *ibid.*, pp 54-6.
26. 'Dublin Photographic Society' in The Liverpool Photo. Jour., ii (1st ser.), no. 15 (10 March 1855), pp 35-7; Saunders's Newsletter, 5 March 1855.
27. Saunders's Newsletter, 12 May 1856.
28. 'Dublin Photographic Society' in The Jour. of the Photo. Soc., iii, no. 54 (21 May 1857), pp 278-9; 'British Association for the Advancement of Science' in The Liverpool and Manchester Photo. Jour., i (n.s.), no. 18 (15 Sept. 1857), p. 195.
29. 'Dublin Photographic Society' in The Jour. of the Photo. Soc., iv, no. 64 (22 Mar. 1858), pp 177-8; Exhibition of decorative art at the Royal Dublin Society (Dublin, 1858), pp 22-4.
30. Gernsheim, Hist. of photog. to the mod. era, pp 584-5; above, pp 77-80; 'The Archer Fund' in The Photo. Jour., v, no. 85 (23 May 1859), pp 298-300; contemporary Dublin street directories do not have an entry for the society; D.P.S. members' names, 1854-9; The Photo. News, iii, no. 78 (2 Mar. 1860), p. 316; *ibid.*, iii, no. 83 (5 Apr. 1860), p. 378; *ibid.*, iv, no. 87 (4 May 1860), p. 12.
31. D.P.S. members' names, 1854-9; 'Dublin Photographic

- Society' in The Jour. of the Photo. Soc., iv, no. 64 (22 Mar. 1858), pp 177-8; 'Photographic Society of Ireland' in The Jour. of the Photo. Soc., iv, no. 66 (21 May 1858), p. 215; Slattery, *Photography in Dublin 1839-61*, p. 56; 'Photographic Society of Ireland' in The Photo. Jour., v, no. 84 (7 May 1859), p. 282; 'Photographic Society of Ireland' in The Photo. Jour., v, no. 86 (15 June 1859), pp 307-08; 'Photographic Society of Ireland' in The Photo. Jour., v, no. 80 (5 Mar. 1859), p. 210; 'Photographic Society of Ireland' in The Photo. Jour., v, no. 82 (9 Apr. 1859), p. 247; John J. Coghill, 'On the mutual relations of photography and art' in R.D.S. Jour., ii (Jan. 1860), pp 380-88.
32. Slattery, *Photography in Dublin 1839-61*, appendix C, p. 134; 'Photographic Society of Ireland' in The Photo. Jour., v, no. 84 (7 May 1859), pp 282-4, in which the text of a lecture, 'Remarks on landscape photography', is given; Henry T. Vickers, 'On instantaneous photography' in The Photo. Jour., vi, no. 88 (16 Aug. 1859), pp 19-20; Slattery, *Photography in Dublin 1839-61*, appendix C, pp 133-4; 'Dublin Photographic Society' in The Jour. of the Photo. Soc., iii, no. 48 (21 Nov. 1856), pp 157-8; 'Dublin Photographic Society' in The Jour. of the Photo. Soc., iv, no. 60 (21 Nov. 1857), pp 92-3, which has 'a detailed account of his second photographic tour in Switzerland'; John J. Coghill, 'Photography as adapted for tourists, exemplified by a recent visit to the Spanish coast' in The Photo. Jour., v, no. 82 (9 Apr. 1859), pp 249-54; Coghill, 'Photography and art', *passim*, p. 387.

33. Below, i, pp 178-83; Saunders's Newsletter, 26 Aug. 1854; ibid., 13 Mar. 1855; above, i, pp 18-20; The Photo. Jour., vi, no. 87 (15 July 1859), p. 8, being a letter from 'Meniscus' of Dublin; 'A copy of the Photographic Album: fading photographs' in The Phot. Jour., vii, no. 114 (15 Oct. 1861), p. 285, being a review of an album in which the work of Coghill, Fitzgerald, Henry, Plunket, and others was included; The Photo. Jour., viii, no. 141 (15 Jan. 1864), p. 432, being a letter from E. G. Ganly of Dublin; Thomas H. Hennah, Photographic manipulation, the collodion process (London, 1854); P. H. Delamotte, The practice of photography: a manual for students and amateurs (3rd ed., London, 1856); Gustave le Gray, Photographic manipulation, his waxed paper process (transl. from the French, London, 1853); Robert Hunt, A manual of photography (3rd ed., London and Glasgow, 1853); P. H. Delamotte, The oxymel process of photography (London, 1856); below, ref. no. 42 in this chapter.
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35. Saunders's Newsletter, 9 July 1850; Sproule, Irish Industrial exhibition, p. 235; T. D. Jones, Record of the exhibition, 1853, (Dublin, 1853), p. 279; Catalogue of photographic apparatus and chemical preparations manufactured and sold by Horne, Thornthwaite and Wood, opticians &c., 121 & 123 Newgate Street, London (reprint with intro., Doncaster, 1974, of orig. ed., London, c. 1853), pp 2-3.
36. Saunders's Newsletter, 6 June 1855; ibid., 12 May

- 1856; *ibid.*, 6 July 1858.
37. Saunders's Newsletter, 2 July 1858; The Liverpool and Manchester Photo. Jour., ii (n.s.), no. 5 (1 March 1858), p. 66; The Liverpool and Manchester Photo. Jour., ii (n.s.), no. 14 (15 July 1858), p. 183; 'Improved developing box' in The Photo. News, ii, no. 34 (29 Apr. 1859), p. 93; 'Notes for photographic tourists' in The Photo. News, ii, no. 39 (3 June 1859), pp 151-2; The Photo. News, ii, no. 45 (15 July 1859), p. 228; Thomas Grubb, 'The aplanatic lens' in The Photo. News, iii, no. 81 (23 Mar. 1860), pp 353-4; The Photo. News, iii, no. 76 (17 Feb. 1860), p. 292; William Despard Hemphill, Stereoscopic illustrations of Clonmel and the surrounding country including abbeys, castles, and scenery with descriptive letterpress (Dublin and London, 1860), *passim*.
38. Saunders's Newsletter, 6 May 1860; below, i, pp 207-10; application for copyright, Jan.- June 1865, P.R.O., Stationers' hall records, nos 272, 273, 274, 275, 276, (Copy 1/8); below, i, pp 183-88; Belfast Newsletter, 2 Mar. 1866.
39. The Dillons of Clonbrock, N.L.I., microfilm P 8344; below, i, pp 85-7; The Brit. Jour. of Phot., xxiv, no. 897 (13 July 1877), p. 336; The Brit. Jour. of Phot., xxvi, no. 1010 (12 Sept. 1879), p. 442.
40. Below, i, pp 87-8; '[Ulster Amateur Photographic Society]' in The Amat. Phot., v, no. 125 (25 Feb. 1887), p. 90; 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxix, no. 1177 (24 Nov. 1882), p. 679; 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxx, no. 1228 (16 Nov. 1883), p. 694; 'Photographic Society of Ireland' in The Brit. Jour.

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42. Rules of the Photographic Society Club with portraits of the members ([London], 1856), p. 30; Grace Seiberling, with Carolyn Bloore, Amateurs, photography, and the mid-Victorian imagination (Chicago and London, 1986), p. 98; the Photographic Album for the year 1855 being contributions from the members of the Photographic Club, n.d., photograph nos 3, 21, 37, and 38; the Photographic Album for the year 1857 being contributions from members of the Photographic Club, n.d., photograph nos 7, 15, 18, and 30; both these albums are in the collection of the R.P.S., Bath, England; Seiberling, Amateurs, photog., and imagination, pp 10-11, 98; List of members of the Photographic Society (London, 1859), pp 7-9, 12, 14.
43. 'The Amateur's Photographic Association' in The Photo. News, v, no. 141 (17 May 1861), p. 229; 'Amateur's Photographic Association' in The Photo. News, v, no. 144 (7 June 1861), p. 274; 'Amateur Photographic Association' in The Photo. Jour., xii, no. 188 (17 Dec. 1867), pp 155-7.
44. Reports of the Amateur Photographic Association in The Photo. News listing new members and subscribers are

found in the following references, known Irish photographers listed as newly joined being included with the references: 'Amateur Photographic Association' in The Photo. News, vi, no. 202 (18 July 1862), p. 346, (Capt. R. J. Henry); vi, no. 219 (14 Nov. 1862), p. 547, (The Hon. L. Wingfield); vi, no. 213 (3 Oct. 1862) p. 477, (Francis E. Currey, Thomas Woods M.D., and Robert Staples); vii, no. 239 (2 Apr. 1863), p. 165, (countess of Rosse); vii, no. 255 (24 July 1863), p. 356, (Thomas Brownrigg); viii, no. 295 (29 Apr. 1864), p. 212, (Lady Staples); viii, no. 310 (12 Aug. 1864), p. 393; ix, no. 333 (20 Jan. 1865), p. 33, (Lord Otho Fitzgerald); x, no. 388 (9 Feb. 1866), p. 67; x, no. 402 (18 May 1866), p. 237; x, no. 427 (9 Nov. 1866), p. 538, (earl of Bantry).

45. The reports of the Amateur Photographic Association annual photographic competitions in the 1860s are found in the following references: 'Amateur Photographic Association' in The Photo. News, vi, no. 187 (4 Apr. 1862), p. 166; vii, no. 255 (24 July 1863), p. 356; viii, no. 311 (19 Aug. 1864), p. 406 (in which Coghill is mentioned); ix, no. 368 (22 Sept. 1865), pp 452-3 (in which the Hon. Augusta Crofton is mentioned); x, no. 430 (30 Nov. 1866), pp 572-3; The Photo. Jour., xii, no. 188 (17 Dec. 1867), pp 155-7; The Brit. Jour. of Phot., xv, no. 450 (18 Dec. 1868), pp 606-07; The Brit. Jour. of Phot., xvi, no. 472 (21 May 1869), p. 247; The Brit. Jour. of Phot., xvii, no. 505 (7 Jan. 1870), pp 7-8.

46. 'Amateur Photographic Association' in The Photo. News, vii, no. 255 (24 July 1863), p. 356; above, ref. no. 45 in this chapter.

47. Above, ref. no. 45 in this chapter; 'Amateur Photographic Association' in The Photo. News, ix, no. 368 (22 Sept. 1865), pp 452-3; The Brit. Jour. of Phot., vii, no. 505 (7 Jan. 1870) pp 7-8.
48. 'Photography at the Dublin exhibition' in The Brit. Jour. of Phot., xii, no. 263 (19 May 1865), p. 268; 'Dublin exhibition: the report of the jury and the list of awards' in The Photo. Jour., x, no. 162 (16 Oct. 1865), pp 168-70.
49. Dublin exhibition 1865, catalogue (Dublin, 1865), pp 197-202; 'Dublin exhibition: the report of the jury', loc. cit., pp 168-70; 'The Dublin exhibition: photographic department' in The Photo. Jour., x, no. 160 (15 Aug. 1865), pp 123-7.
50. 'Dublin exhibition: the report of the jury', loc. cit., p. 169; 'The Dublin exhibition: photographic department' in The Photo. Jour., x, no. 162 (15 Aug. 1865), p. 126; 'Photography at the Dublin exhibition' in The Brit. Jour. of Phot., xii, no. 265 (2 June 1865), p. 291.
51. 'Awards at the French exhibition' in The Brit. Jour. of Phot., xiv, no. 375 (12 July 1867), p. 327; 'Paris Universal Exhibition' in The Brit. Jour. of Phot., xiv, no. 383 (6 Sept. 1867), pp 422-3.
52. Gifford Lewis, Somerville and Ross: the world of the Irish R.M. (London, 1985), p. 27 and passim; 'Amateur Photographic Association' in The Brit. Jour. of Phot., xvii, no. 505 (7 Jan. 1870), pp 7-8; The Brit. Jour. of Phot., xviii, no. 568 (24 Mar. 1871), pp 138-9; The Brit. Jour. of Phot., xxi, no. 739 (3 July 1874), pp 318-9; the Dillons of Clonbrock, circa 1956, N.L.I., microfilm no. P 8344; this family history in

typescript was written by Edith Mahon, a member of the family; Dublin exhibition of arts, industries, and manufactures, 1872 (Dublin, 1872), p. 16; 'The photographic exhibition' in The Brit. Jour. of Phot., xxii, no. 807 (22 Oct. 1875), pp 508-09; 'The photographic exhibition' in The Brit. Jour. of Phot., xxiii, no. 857 (6 Oct. 1876), pp 469-70; 'Amateur Photographic Association' in The Brit. Jour. of Phot., xvii, no. 505 (7 Jan. 1870), pp 7-8; The Brit. Jour. of Phot., xviii, no. 582 (30 June 1871), p. 307; The Brit. Jour. of Phot., xxi, no. 761 (4 Dec. 1874), p. 584; The Brit. Jour. of Phot., xxiii, no. 848 (4 Aug. 1876), p. 369; The Brit. Jour. of Phot., xxvi, no. 1001 (11 July 1879), p. 331.

53. The reports of the Amateur Photographic Association annual competitions for the 1870s are found in the following references in The Brit. Jour. of Phot.: 'Amateur Photographic Association' in The Brit. Jour. of Phot., xvii, no. 505 (7 Jan. 1870), pp 7-8; xviii, no. 568 (24 Mar. 1871), pp 138-9; xix, no. 622 (5 Apr. 1872), pp 161-2; xx, no. 678 (2 May 1873), pp 209-10; xxi, no. 739 (3 July 1874), pp 318-9; xxii, no. 794 (23 July 1875), p. 358; xxiii, no. 848 (4 Aug. 1876), p. 369; xxiv, no. 898 (20 July 1877), p. 347; xxv, no. 950 (19 July 1878), pp 343- 4; xxvi, no. 1001 (11 July 1879), p. 331; xxvii, no. 1055 (23 July 1880), p. 357.
54. The reviews of the 1870s exhibitions of the Photographic Society, London, in which Brownrigg had acceptances are found in the following references in The Brit. Jour. of Phot., and, unless otherwise stated, each article is entitled 'The photographic exhibition': The Brit. Jour. of Phot., xviii, no. 606

- (15 Dec. 1871), pp 588-9; xix, no. 656 (29 Nov. 1872), pp 565-6; 'Exhibition of the Photographic Society' in xx, no. 706 (14 Nov. 1873), pp 540-1; xxii, no. 809 (5 Nov. 1875), pp 530-1; xxiii, no. 855 (22 Sept. 1876), pp 447-8; xxiv, no. 912 (26 Oct. 1877), pp 508-9; xxv, no. 964 (25 Oct. 1878), pp 504-5; xxvii, no. 1067 (15 Oct. 1880), pp 495-6.
55. 'The photographic exhibition' in The Brit. Jour. of Phot., xxiv, no. 912 (26 Oct. 1877), pp 508-9; 'Exhibition of the Photographic Society' in The Brit. Jour. of Phot., xx, no. 706 (14 Nov. 1873), pp 540-1; 'Photography at the Dublin exhibition' in The Brit. Jour. of Phot., xix, no. 631 (7 June 1872), pp 263-4; 'Photography at Vienna' in The Brit. Jour. of Phot., xx, no. 690 (25 July 1873), pp 351-2; 'Photography at Vienna' in The Brit. Jour. of Phot., xx, no. 695 (29 Aug. 1873), p. 411; 'The Belgian medal awards' in The Brit. Jour. of Phot., xxii, no. 804 (1 Oct. 1875), p. 475.
56. Gernsheim, Concise hist. of photog., pp 34-5; Kraszna-Krausz, Focal ency. i, pp 132, 100; George Mansfield, 'More gelatino-bromide notes' in The Brit. Jour. of Phot., xxvi, no. 998 (20 June 1879), p. 290; Gernsheim, Concise hist. of photog., p. 35.
57. George Mansfield, 'Hints for beginners' in The British Journal photographic almanac and photographer's daily companion, 1878 (London, 1878), pp 81-3; hereafter, issues of this annual will be cited as: The Brit. Jour. phot. alm.
58. Irish Times, 5 July 1879.
59. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1002 (18 July 1879), p. 344.

60. 'Ulster Amateur Photographic Society' in The Amat. Phot., ii (18 Dec. 1885), pp 623-4; issues of The Amat. Phot. were not assigned numbers until January 1886; 'Belfast Y.M.C.A. Photographic Club' in The Amat. Phot., ix, no. 237 (19 Apr. 1889), p. 261, the ref. to 'photographic club' probably being a misprint as virtually all published reports from the club were headed 'camera club'; 'Munster' in The Amat. Phot., xxiii, no. 592 (7 Feb. 1896), p. 124; 'Cork Literary and Scientific Society' in The Amat. Phot., xiv, no. 376 (18 Dec. 1891), p. 460; ['Dublin Y.M.C.A. Camera Club'] in The Amat. Phot., xiii, no. 338 (27 Mar. 1891), p. 222; 'Photographic exhibition at Wexford' in The Brit. Jour. of Phot., xlv, no. 1946 (20 Aug. 1897), p. 541; 'Ordinary meeting' in The Photo. Jour., xxiv (n.s.), no. 4 (23 Dec. 1899), pp 106-07.
61. 'Ulster Amateur Photographic Society' in The Amat. Phot., ii (18 Dec. 1885), pp 623-4; R. Lloyd Praeger, Some Irish Naturalists (Dundalk, 1949), pp 88, 161, 178; Boylan, Dict. of Ir. biog., p. 309; 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1002 (18 July 1879), p. 344; 'Photographic Society of Ireland' in The Amat. Phot., viii, no. 212 (26 Oct. 1888), p. 268; there are numerous references in the Monthly Notices of the Royal Astronomical Society from 1880 to 1900 to do with Howard Grubb's contribution to stellar photography which will be discussed below in ii, pp 43-6.
62. 'Obituary' in The Brit. Jour. of Phot., xxix, no. 1138 (24 Feb. 1882), p. 115; J. V. Robinson is seen to be active in the proceedings of the P.S.I. in the following references entitled 'Photographic Society of

Ireland' in The Brit. Jour. of Phot.: 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1011 (19 Sept. 1879), p. 453; xxvii, no. 1028 (16 Jan. 1880), p. 34; xxvii, no. 1034 (27 Feb. 1880), p. 106; xxvii, no. 1037 (19 Mar. 1880), p. 142; xxviii, no. 1082 (28 Jan. 1881), p. 45; xxviii, no. 1093 (15 Apr. 1881), p. 185; xxviii, no. 1120 (21 Oct. 1881), p. 549; xxviii, no. 1128 (16 Dec. 1881) p. 651.

63. Above, i, p. 86; the following is a list of articles written by George Mansfield at this time: 'Hints for beginners' in The Brit. Jour. phot. alm., 1878 (London, 1878), pp 81-3; 'Photography at the Paris exhibition' in The Brit. Jour. phot. alm., 1879 (London, 1879), pp 92-3; 'Notes from a season's experience with gelatine' in The Brit. Jour. phot. alm., 1880 (London, 1880), pp 53-4; 'A convert to gelatine' in The Brit. Jour. phot. alm., 1881 (London, 1881), pp 57-8; 'On exposure' in The Brit. Jour. phot. alm., 1882 (London, 1882), pp 115-17; 'Gelatine and wet collodion' in The Brit. Jour. phot. alm., 1883 (London, 1883), pp 77-8; 'Exposure and development' in The Brit. Jour. phot. alm., 1884 (London, 1884), pp 79-80; 'A few hints on printing' in The Brit. Jour. phot. alm., 1885 (London, 1885), pp 86-8; 'A step in advance' in The Brit. Jour. phot. alm., 1886 (London, 1886), pp 162-3; 'Rapid plates versus slow, film versus glass' in The Brit. Jour. phot. alm., 1889 (London, 1889) pp 487-8; 'More gelatino-bromide notes' in The Brit. Jour. of Phot., xxvi, no. 998 (20 June 1879), p. 290; 'Experiments with Dr. Monckoven's method of preparing gelatine emulsion' in The Brit. Jour. of Phot., xxvi, no. 1018 (7 Nov. 1879), p. 530;

- 'Gleanings at home and abroad' in The Brit. Jour. of Phot., xxvii, no. 1066 (8 Oct. 1880), pp 489-90;
- 'Gleanings at home and abroad' in The Brit. Jour. of Phot., xxvii, no. 1070 (5 Nov. 1880), pp 532-3; 'A gelatino-alkaline developer' in The Brit. Jour. of Phot., xxviii, no. 1084 (11 Feb. 1881), pp 63-4;
- 'Practical notes from the recent Bristol exhibition' in The Brit. Jour. of Phot., xxviii, no. 1082 (28 Jan. 1881), pp 39-40; 'A season's experience' in The Brit. Jour. of Phot., xxviii, no. 1121 (28 Oct. 1881), pp 555-6; 'Where to go with the camera: Trouville and environs' in The Brit. Jour. of Phot., xxix, no. 1151 (26 May 1882), pp 303-4; 'Notes from abroad' in The Brit. Jour. of Phot., xxix, no. 1147 (28 Apr. 1882), pp 247-8; 'Paper negatives' in The Brit. Jour. of Phot., xxxii, no. 1287 (2 Jan. 1885), pp 7-8.
64. 'Amateur Photographic Association' in The Brit. Jour. of Phot., xix, no. 622 (5 April 1872), p. 161;
- 'Amateur Photographic Association' in The Brit. Jour. of Phot., xxiii, no. 848 (4 Aug. 1876), p. 369.
65. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1011 (19 Sept. 1879), p. 453; The Brit. Jour. of Phot., xxvii, no. 1067 (15 Oct. 1880), p. 502; 'Photographic Society of Ireland' [exhibition review] in The Brit. Jour. of Phot., xxxi, no. 1281 (21 Nov. 1884), pp 747-8; 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., x, no. 270 (6 Dec. 1889), p. 384; 'Belfast Y.M.C.A. Camera Club exhibition' in The Amat. Phot., xx, no. 521 (28 Sept. 1894), pp 209-10; ['Ulster Amateur Photographic Society'] in The Amat. Phot., v, no. 125 (25 Feb. 1887), p. 90.
66. For evaluation of the exhibition see the following:

- 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxxi, no. 1281 (21 Nov. 1884), pp 747-8; The Brit. Jour. of Phot., xxxi, no. 1282 (28 Nov. 1884), p. 764; The Brit. Jour. of Phot., xxxi, no. 1283 (5 Dec. 1884), p. 780; The Amat. Phot., i (23 Jan. 1885), p. 250; The Amat. Phot., iv, no. 111 (19 Nov. 1886), p. 250.
67. For rules, regulations, and details of awards see: 'Photographic Society of Ireland' in The Amat. Phot., v, no. 140 (10 June 1887), p. 277; for evaluation of the exhibition see: 'Dublin photographic exhibition' in The Amat. Phot., vi, no. 162 (11 Nov. 1887), p. 235; 'Dublin photographic exhibition' in The Amat. Phot., vi, no. 164 (25 Nov. 1887), p. 261; 'The Photographic Society of Ireland: second exhibition held at the Royal Hibernian Academy, Dublin, November 1887' in The Brit. Jour. of Phot., xxxv, no. 1444 (6 Jan. 1888), pp 5-6.
68. 'Belfast Y.M.C.A. Camera Club exhibition' in The Amat. Phot., xx, no. 521 (28 Sept. 1894), pp 209-10; 'The City of Belfast Y.M.C.A. Camera Club' in The Amat. Phot., xxviii, no. 723 (12 Aug. 1898), p. 632; 'Exhibition at Belfast' in The Amat. Phot., xxviii, no. 735 (4 Nov. 1898), p. 872.
69. 'Photographic exhibition at Wexford' in The Brit. Jour. of Phot., xliv, no. 1946 (20 Aug. 1897), p. 541.
70. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1011 (19 Sept. 1879), p. 453; The Brit. Jour. of Phot., xxxi, no. 1281 (21 Nov. 1884), p. 749; The Brit. Jour. of Phot., xxvii, no. 1064 (24 Sept. 1880), p. 467; The Brit. Jour. of Phot., xxviii, no. 1099 (27 May 1881), p. 272; The Amat. Phot., ii

- (10 July 1885), p. 216; The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70; The Amat. Phot., vi, no. 144 (8 July 1887), p. 9; The Amat. Phot., vii, no. 193 (15 June 1888), p. 381; The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70; The Amat. Phot., ii (10 July 1885), p. 216.
71. 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., x, no. 248 (5 July 1889), p. 12; The Amat. Phot., ix, no. 247 (28 June 1889), p. 429; 'Belfast Y.M.C.A.' in The Amat. Phot., xiii, no. 347 (29 May 1891), p. 394; 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., xxi, no. 552 (3 May 1895), p. 287.
72. 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., ix, no. 247 (28 June 1889), p. 429; 'Belfast Y.M.C.A.' in The Amat. Phot., xiii, no. 347 (29 May 1891), p. 394; 'Belfast Camera Club' in The Amat. Phot., xi, no. 294 (23 May 1890), p. 380; 'Belfast Y.M.C.A.' in The Amat. Phot., xv, no. 399 (27 May 1892), p. 423; 'Photographic Society of Ireland' in The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70.
73. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvii, no. 1064 (24 Sept. 1880), p. 467; The Amat. Phot., ii (10 July 1885), p. 216; The Amat. Phot., vi, no. 144 (8 July 1887), p. 9; 'Belfast Y.M.C.A.' in The Amat. Phot., xiii, no. 347 (29 May 1891), p. 394.
74. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvi, no. 1011 (19 Sept. 1879), p. 453; The Amat. Phot., ii (10 July 1885), p. 216; The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70.
75. 'Photographic Society of Ireland' in The Amat. Phot., vi, no. 144 (8 July 1887), p. 9.

76. Above, previous ref..
77. 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., ix, no. 247 (28 June 1889), p. 429; The Amat. Phot., x, no. 248 (5 July 1889), p. 12; 'Belfast Camera Club' in The Amat. Phot., xi, no. 294 (23 May 1890), p. 380; 'Belfast Y.M.C.A.' in The Amat. Phot., xv, no. 399 (27 May 1892), p. 423.
78. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvii, no. 1064 (24 Sept. 1880), p. 467; The Amat. Phot., vi, no. 144 (8 July 1887), p. 9.
79. 'Belfast Y.M.C.A. Camera Club' in The Amat. Phot., x, no. 248 (5 July 1889), p. 12; The Amat. Phot., ix, no. 247 (28 June 1889), p. 429; The Amat. Phot., xxi, no. 552 (3 May 1895), p. 287.
80. 'Photographic Society of Ireland' in The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70; The Amat. Phot., xxvii, no. 1064 (24 Sept. 1880), p. 467; for Drogheda excursion see 'Photographic Society of Ireland' in The Amat. Phot., vii, no. 193 (15 June 1888), p. 381; for Glendalough and Roundwood excursions see the following two references: 'Photographic Society of Ireland' in The Amat. Phot., ii (10 July 1885), p. 216 and in The Amat. Phot., vi, no. 144 (8 July 1887), p. 9; 'Photographic Society of Ireland' in The Amat. Phot., iv, no. 96 (6 Aug. 1886), p. 70; 'Belfast Camera Club' in The Amat. Phot., xi, no. 294 (23 May 1890), p. 380.
81. 'Photographic Society of Ireland' in The Brit. Jour. of Phot., xxvii, no. 1041 (16 Apr. 1880), p. 190; The Brit. Jour. of Phot., xxviii, no. 1089 (18 Mar. 1881), p. 138; The Brit. Jour. of Phot., xxix, no. 1141 (17 Mar. 1882), p. 156.
82. 'Photographic Society of Ireland' in The Brit. Jour.

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Chapter 5: Travel photography

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8. Shaw Smith, Travel diary, pp 26, 27.
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10. *Ibid.*, pp 32, 80-82, 140-41, 26, 18, 28, 40, 136.
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Chapter 6: Prison photography

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- the prisons of Ireland, p. 431, [3522], H.C. 1865, xxiv, 1.
29. Ibid.; Forty-second report of the inspectors-general on ... the prisons of Ireland, p. 120, [3377], H.C. 1864, xxvii, 1.
30. Forty-fourth report of the inspectors-general on ... the prisons of Ireland, p. 119, [3690], H.C. 1866, xxxiv, 235; Forty-fifth report of the inspectors-general on ... the prisons of Ireland, pp 155, 258, 281, 299, 322, [3915], H.C. 1867, xxxv, 1; Forty-sixth report of the inspectors-general on ... the prisons of Ireland, pp 172, 211, 228, 250, 283, 320, 338, 449, [4070], H.C. 1867-68, xxxv, 1; Forty-eighth report of the inspectors-general on ... the prisons of Ireland, passim, [C.173], H.C. 1870, xxxvii, 233; Forty-ninth report of the inspectors-general on ... the prisons of Ireland, p. 276, [C.359], H.C. 1871, xxx, 1.
31. Forty-second report of the inspectors-general on ... the prisons of Ireland, p. 120, [3377], H.C. 1864, xxvii, 1; Forty-fourth report of the inspectors-general on ... the prisons of Ireland, p. 400, [3690], H.C. 1866, xxxiv, 235; Forty-third report of the inspectors-general on ... the prisons of Ireland, p. 443, [3522], H.C. 1865, xxiv, 1; Forty-fifth report of the inspectors-general on ... the prisons of Ireland, pp 110, 142, [3915], H.C. 1867, xxxv, 1; Forty-ninth report of the inspectors-general on ... the prisons of Ireland, passim, [C.359], H.C. 1871, xxx, 1.
32. Forty-ninth report of the inspectors-general on ... the prisons of Ireland, p. 209, [C.359], H. C. 1871, xxx, 1; Forty-fifth report of the inspectors-general on ... the prisons of Ireland, p. 258, [3915], H.C.

- 1867, xxxv, 1; 34 & 35 vict. c. 112 (21 Aug. 1871); Forty-ninth report of the inspectors-general on ... the prisons of Ireland, p. 461, [C. 359], H.C. 1871, xxx, 1.
33. 32 & 33 Vict., c. 99 (11 Aug. 1869).
34. Hansard's parliamentary debates, third series, 1830-91 (vols i-ccclvi, London, 1831-91), cxciv, 710 (5 Mar. 1869).
35. 32 & 33 Vict., c. 99 (11 Aug. 1869).
36. Ibid..
37. N.A., P.O., 15 Oct. 1869, 218 (government); N.A., R.P. 1869/15,384; N.A., P.O., 7 May 1869, 160 (Mountjoy male); N.A., P.O., 14 Oct. 1869, 218 (government); N.A., P.O., 19 Oct. 1869, 220 (government); N.A., R.P. 1869/15,197.
38. N.A., R.P. 1869/20,469.
39. Ibid..
40. Ibid.; N.A., chief crown solicitor's papers, 1870, no. 110.
41. N.A., R.P. 1869/20,469.
42. N.A., chief crown solicitor's papers, 1870, no. 110.
43. Examples from 1870 are to be found in: N.A., R.P. 1870/16,205; 1870/19,228; 1870/19,856; 1870/20,769; examples from 1871 are to be found in: N.A., R.P. 1871/2,931; 1871/8,577; 1871/8,842; 1871/9,632; 1871/11,510; 1871/11,721; 1870/9,932.
44. N.A., R.P. 1869/20,469; 32 & 33 Vict., c. 99 (11 Aug. 1869).
45. N.A., R.P. 1870/7,489; 1870/9,489; board of superintendence, city of Dublin prisons, 'rough minutes', 11 May 1870, vol. 1868 - 1870, folio 182a, Dublin Corporation Archive, DCA/BSP/3/5; N.A., R.P.

- 1871/972; Board of superintendence, city of Dublin prisons, 'rough minutes', 25 Jan. 1871, vol. 1870 - 1873, folio 50a, Dublin Corporation Archive, DCA/BSP/3/6.
46. N.A., R.P. 1870/19,621; 1870/21,300; 1870/19,228; 1870/22,416.
47. N.A., R.P. 1870/18,284.
48. Forty-eighth report of the inspectors-general on ... the prisons of Ireland, pp 262, 322, 342, 387, 429, 455-6, 488, 512, 527, [C.173], H. C. 1870, xxxvii, 233; N.A., R.P. 1871/9,648; 34 & 35 Vict. c. 112 (21 Aug. 1871).
49. 34 & 35 Vict., c. 112 (21 Aug. 1871); if a prisoner resisted being photographed he would be deemed to have infringed the fifteenth regulation in section 109, 7 Geo. IV, c. 74 (31 May 1826), which made it an offence to disobey 'any rules of the prison'.
50. McDowell, Ir. administration, p. 158; N.A., P.O., 11 Feb. 1873, 29 (Mountjoy male); N.A., P.O., 30 July 1873, 143 (government).
51. McDowell, Ir. administration, p. 159.
52. N.A., R.P. 1878/1,682; 1879/843; 1879/2,210.
53. Rules for local prisons, Ireland (Dublin, 1878), p. 29.
54. N.A., prison board of Ireland, circular no. 88, in carton labelled 'general prisons board, returns of photography, 1897-1900', hereafter cited as: P.B., returns of photography, 1897-1900; I am grateful to Anne Neary, archivist at the N.A., for locating this carton; N.A., R.P. 1896/20,045.
55. N.A., prison board of Ireland correspondence (hereafter cited as P.B.C.) 1879/3,069; 1879/3,243;

- 1879/3,552; 1879/3,768; 1879/4,117; it is difficult to say how extensive the resistance was as the correspondence is not extant; the prison board correspondence registers note the 'refusal of prisoners to be photographed' at Wexford; N.A., P.B.C. 1879/15,333; N.A., prison board minute book, vol i, p. 184; N.A., P.B.C. 1887/5,947.
56. N.A., P.B.C. 1879/16,924; on 16 December a letter from Drogheda was received by the board which stated that the prisoners Riley (sic) had been photographed; the correspondence is not extant but the appropriate correspondence registry entry reads: 'Prs. Riley (sic) (man and wife) have been photographed'.
57. N.A., P.B.C. 1885/13,373.
58. N.A., P.B.C. 1886/6,941.
59. N.A., P.B.C. 1887/5,947; Thom's almanac, 1887 (Dublin, 1887), p. 786.
60. N.A., P.B.C. 1893/11,691.
61. N.A., regulations for photography, 1877, P.B., returns of photography, 1897-1900; N.A., P.B.C. 1891/9,659; the directive to introduce the photographic mirror can be found in circular no. 381 on this file; N.A., regulations for photography, 1897, P.B., returns of photography, 1897-1900.
62. N.A., P.B.C. 1883/15,085; 1883/14,601.
63. N.A., P.B.C. 1887/5,244.
64. N.A., P.B.C. 1888/2,885; 1894/11,985.
65. N.A., P.B.C. 1893/5,349; 1894/11,985.
66. N.A., regulations for photography, 22 Jan. 1898, P.B. returns of photography, 1897-1900, which directed that weekly photographic practice take place and that samples of work be submitted monthly to the prison

- board; N.A., P.B.C. 1885/15,026.
67. N.A., P.B.C. 1894/2,854.
68. N.A., P.B.C. 1896/2,859; 1896/3,230.
69. N.A., P.B.C. 1894/158.
70. N.A., P.B.C. 1879/8,909; 1879/11,065; 1879/15,911; 1879/11,699; 1879/15,911; 1880/14,797; 1880/826; 1880/13,003; 1880/17,270; 1880/11,411; 1880/2,968; 1880/10,260; as prison board correspondence is not extant for these years these entries in the correspondence register proved invaluable in showing the importance of the Dublin prisons in photographic tuition at this time; N.A., P.B.C. 1879/2,584; 1879/13,539; 1880/13,166; 1879/11,311.
71. N.A., P.B., minute book, vol ii, p. 247; N.A., regulations for photography, April 1883, P.B. returns of photography, 1897-1900.
72. N.A., P.B.C. 1884/6,172.
73. N.A., P.B.C. 1884/9,032.
74. N.A., P.B.C. 1888/5,204.
75. N.A., P.B.C. 1890/8,682; 1886/5,773; 1886/6,076; 1884/9,032; 1891/11,787; 1884/6,172; 1884/9,032; 1884/9,978; 1886/3,564; 1888/5,204; 1890/8,682; 1893/7,838; 1884/6,172; 1884/13,179.
76. Mountjoy continued to be used as a tuition centre for photography in the 1880s: N.A., P.B.C. 1883/5,746; 1883/8,378; 1884/9,032; 1885/13,940; 1885/13,198; 1886/6,076; 1888/5,204; 1890/8,682; 1891/11,787; 1884/7,050; 1883/2,877; 1888/9,673; 1886/5,773; 1884/11,373; 1886/3,564.
77. N.A., P.B.C. 1886/5,773.
78. N.A., P.B.C. 1886/6,076; 1884/9,032; 1893/7,838; 1890/8,682; 1888/5,204; 1884/13,179.

79. N.A., P.B.C. 1884/9,032; 1890/8,682; 1884/9,978.
80. N.A., P.B. minute book, vol i, p. 280; vol ii, p. 53; N.A., P.B.C. 1888/5,204; 1884/9,978; 1884/8,015; 1886/3,564.
81. N.A., P.B.C. 1880/1,012; 1882/24,583; N.A., P.B. minute book, vol ii, p. 247; N.A., P.B.C. 1882/23,400; 1882/24,583; 1883/2,492; 1883/10,747; 1883/12,940; 1884/526; 1884/10,065; 1884/15,219; 1884/16,820; 1884/5,693; 1884/3,487; 1891/9,902; 1892/3,511; 1893/698; 1894/897.
82. N.A., P.B.C. 1884/14,507; 1885/8,169; 1887/3,487; 1884/526; 1884/1,400; 1884/526.
83. N.A., P.B.C. 1891/9,902; 1884/16,820; 1894/897; 1896/6,626; 1892/934; 1884/12,491.
84. Below, ii, pp 1-31, police photography; photographs requested by or given to Irish police in one sample year in the 1880s, 1884: N.A., P.B.C. 1884/9,775; 1884/4,254; 1884/3,855; 1884/7,445; 1884/4,255; photographs requested by or given to Irish police in one sample year in the 1890s, 1895: N.A., P.B.C. 1895/823; 1895/838; 1895/3,278; 1895/4,366; 1895/5,063; 1895/7,703; 1895/9,840; 1895/10,422; 1895/11,923; 1895/11,924; 1895/12,854; 1895/13,918; 1895/13,937; 1895/14,241; 1895/14,631; photographs requested by police forces in England: N.A., P.B.C. 1884/5,293; 1885/9,842; 1889/1,859; 1890/13,248; 1896/7,322; N.A., P.B.C., corr. reg., 1899-1900, p. 6.
85. N.A., P.B.C. 1895/9,740; 1895/9,672; 1895/7,979
86. N.L.I., Larcom papers, MS 7698; N.A., P.B.C. 1883/17,380; N.A., R.P. 1866/18,731; N.A., P.B.C. 1884/7,062; 1884/7,321; 1884/7,445; Leon O'Broin, Revolutionary underground, the story of the Irish

Republican Brotherhood, 1858-1924 (Dublin, 1976), p. 55; N.A., P.B.C. 1885/7,800; 1885/13,688; 1883/3,867; K. R. M. Short, The dynamite war (Dublin, 1979), p. 110.

87. N.A., P.B.C. 1884/8,474; 1894/12,234; above, i, pp 263-66.
88. Gerald Lambourne, The fingerprint story (London, 1984), pp 50-51; N.A., P.B.C. 1895/5,376.
89. N.A., P.B.C. 1895/14,987; 1896/5,555; 1896/5,822; F. J. Mouat, 'Notes on M. Bertillon's discourse on the anthropometric measurement of criminals' in The Jour. of the Anthropo. Inst. of G. B. and Ire., xx (1890-1), p. 187: in this article written in English in the first person, based on a discourse given in French by Dr Jacques Bertillon to the institute, Dr F. J. Mouat wrote: 'The officials employed in searches [in anthropometrical records in Paris], notwithstanding their dexterity, now make use of the figures alone, so that photography is now of hardly any use, and is only employed as a means of check'.

Chapter 7: Police photography

1. Leon O'Broin, Fenian fever, an Anglo-American dilemma (London, 1971), pp 44, 111, 138; Murray to Naas, 28 Nov. 1866 (N.L.I., Mayo papers, MS 11189 (3)).
2. Mc Dowell, Ir. administration, p. 158; Murray to Naas, *ibid.*; N.A., indexes to registered papers, July - Sept. 1866; Thom's almanac, 1866 (Dublin, 1866), p. 886.
3. N.A., R.P. 1866/17,229; 1866/14,061; 1866/16,187.
4. N.A., R.P. 1867/18,194.

5. N.A., government letter book, 14 Jan. 1867; N.A., R.P. 1867/10,679; 1867/14,946.
6. N.A., R.P. 1866/14,618; 1866/16,267; 1866/15,254.
7. N.A., R.P. 1867/14,946; 1867/22,578; Irish Times, 9 Dec. 1867; R. V. Comerford, 'Gladstone's first Irish enterprise, 1864-70' in W. E. Vaughan (ed.), A new history of Ireland:5, Ireland under the union, I, 1801-70 (Oxford, 1989), pp 440-41.
8. N.A., R.P. 1866/12,529.
9. T. W. Moody (ed.), The fenian movement (Dublin and Cork, 1978), p. 60; O'Broin, Fenian fever, p. 114; Comerford, loc. cit., pp 437-8; N.L.I., Larcom papers, MS 7590.
10. N.L.I., Larcom papers, MS 7590.
11. N.L.I., Mayo papers, MS 11189 (10).
12. Boylan, Dict. of Ir. biog., p. 31; N.A., P.O., 1 Jan. 1868, 1 (government); N.A., Fenian files, 'r' series, 2019 R; N.A., P.O., 9 Jan. 1868, 18 (Mountjoy male).
13. There are remarkably few references to photography in the correspondence registers of the chief secretary's office in respect of the 1870s; N.A., Fenian files, 'r' series, 2019 R; N.A., R.P. 1871/3,250.
14. N.A., P.O., 6 Mar. 1873, 53 (Mountjoy male); N.A., P.O., 10 Mar. 1873, 59 (Mountjoy male); N.A., P.O., 25 Aug. 1874, 89; in 1874 a simplified method, one series of numbers, was used to identify correspondence in the prison office and from this year it is unnecessary to name a prison when citing a reference; N.A., P.O., 13 May 1876, 2,461; N.A., P.O., 24 Apr. 1876, 2,396.
15. N.A., P.B. letter book, 1903/F1, pp 424-5.
16. N.A., P.B. letter book, 1903/F1, pp 423-4; 39 & 40 Vict., c. 23 (13 July 1876).

17. N.A., P.B. letter book, 1903/F1, pp 424-5.
18. T. W. Moody and F. X. Martin (ed.), The course of Irish history (Cork, 1967), pp 286-7; N.A., Fenian files, 'f' series, FP/3.
19. K. R. M. Short, The dynamite war (Dublin, 1979), p. 85; T. W. Moody, Davitt and Irish revolution (Oxford, 1981), pp 465, 572; Thom's almanac, 1883 (Dublin, 1883), p. 794; N.A., P.B. 1883/3,867.
20. Short, Dynamite war, p. 190; N.A., Fenian files, 'f' series, FP/1/ii for which see (a) to (e) below; this file contains five lists of names of persons whose photographic portraits were available to the authorities:
 - (a) a list entitled 'a list of photographs with descriptions etc. sent to Lord Naas, Irish Office, London'; the list contains fifty-two names, is undated and unsigned, but is tentatively dated by this author to the early months of 1868.
 - (b) an untitled list of persons whose photographic portraits were on file; it is signed by Head-constable J. Cottingham and dated 20 Feb. 1883; there were fifty-nine photographs of fifteen persons on file in addition to a 'land league group'.
 - (c) an undated list entitled 'in envelope "photos of land leaguers"'; it contains eighteen names and includes Parnell, the two Redmonds, J. G. Biggar, Patrick Egan, Michael Davitt, Father Sheehy, John Dillon, J. R. Cox, and T. M. Healy.
 - (d) a list entitled 'photographs of the London prisoners'; this unsigned and undated list refers

- to what K. R. M. Short calls 'the Gallagher team' in the dynamite campaign in England in the 1880s.
- (e) a 'list of fenians and American fenians'; this document, discussed below, is unsigned and undated but appears to be in the handwriting of District Inspector Samuel Abraham Waters.
21. Short, Dynamite war, pp 148-9; N.A., Fenian files, 'f' series, FP1/ii, described above at ref. no. 20 (d).
 22. Short, Dynamite war, p. 190; John Sweeney, At Scotland Yard (London, 1904), pp 124-37.
 23. N.A., Fenian files, 'f' series, FP1/ii, mentioned briefly in ref. no. 20 (e) above and discussed here in greater detail.
 24. Ibid.; Thom's almanac, 1886 (Dublin, 1886), p. 786.
 25. N.A., Fenian files, 'f' series, FP1/ii.
 26. Harry Söderman and John J. O'Connell, Modern criminal investigation (New York and London, 1936), p. 44; Patrick Quinlivan and Paul Rose, The fenians in England 1865-1872, a sense of insecurity (London and New York, 1982), between pp 86 and 87; Short, Dynamite war, p. 105; N.A., R.P. 1893/2,877; Helmut Gernsheim (ed.), Incunabula of British photographic literature, a bibliography of British photographic literature 1839-75 and British books illustrated with original photographs (London and Berkeley, 1984), p. 36.
 27. N.A., Fenian files, 'r' series, 2019 R; N.A., R.P. 1871/3,250.
 28. N.A., R.P. 1881/25,113.
 29. N.A., R.P. 1889/6,495.
 30. Boylan, Dict. of Ir. biog., p. 200.
 31. Thom's almanac, 1890 (Dublin, 1890), p. 786; N.A., R.P. 1889/7,599.

32. N.A., Crime branch special files (hereafter cited as C.B.S.) 1890/230/S.
33. Ibid..
34. N.A., C.B.S. 1892/9,524/S.
35. N.A., C.B.S. 1890/230/S.
36. N.L.I., chief secretary's office: Irish news cuttings with some annotations (196 vols., 1880-1920), i, 1894, pp 1-4.
37. Below, ii, pp 99-100; N.A., R.P. 1905/968.
38. N.A., R.P. 1905/968.
39. Ibid.; the three instances of cameras being used outdoors at crowd scenes are:
- (i) evictions in the Aran Islands (Apr. 1894).
 - (ii) street-preaching in Cork City (Mar.- Sept. 1894).
 - (iii) street-preaching in Athlone (Mar. 1895).
- N.A., R.P. 1905/968.
40. Thom's almanac, 1890 (Dublin, 1890), p. 801; N.A., C.B.S. 1890/230/S.
41. N.A., C.B.S. 1890/230/S; R. C. Smith, Antique cameras (Newton Abbot, 1975), pp 133-4.
42. N.A., Dublin Metropolitan Police papers (hereafter cited as D.M.P.), 1890/1,706.
43. N.A., R.P. 1890/7,132; 1893/3,005; 1902/37,682; 1908/21,317; 1917/5,614.
44. N.A., police and crime dept. (hereafter cited as P. & C.), descriptions (16) with photos of suspected persons, 1892-3.
45. N.A., C.B.S. 1892/9,524/S.
46. N.A., P. & C. descriptions, 1892-3.
47. N.A., R.P. 1891/18,532.
48. Ibid..
49. Ibid..

50. N.A., C.B.S. 1894/8,796/S.
51. Ibid..
52. Ibid..
53. Ibid..
54. N.A., C.B.S. 1895/10,002/S.
55. N.A., C.B.S. 1895/9,677/S; Thom's almanac, 1894 (Dublin, 1894), p. 327.
56. N.A., R.P. 1894/16,588.
57. Ibid..
58. Ibid..
59. Ibid..
60. Ibid..
61. N.A., C.B.S. 1895/9,786/S; additional information from Anne Neary, archivist, formerly of the N.A., Dublin.
62. N.A., C.B.S. 1897/14,253/S.
63. N.A., C.B.S. 1898/15,872/S.

Chapter 8: Photography and science

1. Anna Atkins, Photographs of British algae. Cyanotype impressions (3 vols, London, 1843-1853); Arnold, Henry Talbot (London, 1977), p. 250; J. L. E. Dreyer (ed.), History of the Royal Astronomical Society 1820-1920 (London, 1923), p. 112; Carolyn Bloore, 'Hugh Welch Diamond Esq., M.D., F.S.A.' in The Photo. Jour., cxx, no. 8 (Sept.- Oct. 1980), pp 324-9; Peadar Slattery, Photography in Dublin 1839-61, appendix D, pp 137, 140, 143; N.A., P.O., 11 Nov. 1862, 279 (Mountjoy male); Slattery, Photography in Dublin 1839-61, appendix D, pp 142-3; Robert Lloyd Praeger, Some Irish naturalists (Dundalk, 1949), p. 158; William E. Steele, A handbook of field botany, comprising the

- flowering plants and ferns indigenous to the British Isles (Dublin, 1847); William E. Steele, A handbook of field botany, comprising the flowering plants and ferns indigenous to the British Isles (2nd ed., Dublin, 1851).
2. E. Perceval Wright, 'Note on *desmarestia dudresnayi*' in Notes from the Botanical School of Trinity College, Dublin (Jan. 1901), pp 149-50; 'Dublin Photographic Society' in The Liverpool Photo. Jour., ii (1st ser.), no. 15 (10 Mar. 1855), p. 36.
 3. 'Dublin Photographic Society', loc. cit., p. 36.
 4. Dreyer, Hist. of the R.A.S., p. 250; 'Proceedings' in R.I.A. Proc., ii (1840-44), p. 251.
 5. Dreyer, Hist. of the R.A.S., p. 112; Colin A. Ronan, Their Majesties Astronomers (London, 1967), pp 156-7; Lord Rosse to Henry Talbot, 2 Feb. 1854, Talbot Museum, Lacock, Wiltshire, Talbot correspondence, LA 54-5; Dreyer, *ibid.*, p. 113; Thomas Grubb, 'On lunar photography' in The Jour. of the Photo. Soc., iii, no. 54 (21 May 1857), pp 279-81; Dreyer, *ibid.*; Ronan, Their Majesties Astronomers, p. 157.
 6. Patrick Moore, The astronomy of Birr castle (Birr, 1981), pp 12, 15, 19, 23-5, 16; Charles Parsons (ed.), The scientific papers of William Parsons, third Earl of Rosse, 1800-67, (n.p., 1926), pp 106, 119; *ibid.*, pp 105-07, 119, 106; *ibid.*, 107, 118, 122, 124; Moore, Astronomy of Birr castle, p. 49.
 7. Sproule, Irish exhibition, pp 228-9; Slattery, Photography in Dublin 1839-61, appendix C, pp 133-4; Grubb, loc. cit., pp 279-81; Grubb, loc. cit., p. 280; Lord Rosse to Henry Talbot, 2 Feb. 1854 (Talbot Museum, Lacock, Wiltshire, Talbot correspondence, LA

- 45-5); Grubb, loc. cit., p. 281.
8. H. A. Brück and M. T. Brück, The peripatetic astronomer: the life of Charles Piazzi Smyth (Bristol, 1988), pp 50-64.
 9. Howard Grubb, 'Celestial photography' in The Brit. Jour. phot. alm., 1869 (London, 1868), pp 78-83.
 10. 'Rept. of the council to the sixty-third a.g.m. of the soc.' in Mon. Not. of the R.A.S., xliii, no. 4 (9 Feb. 1883), p. 197; Andrew A. Common, 'Note on stellar photography' in Mon. Not. of the R.A.S., xlv, no. 1 (14 Nov. 1884), pp 22-5; 'Rept. of the council to the sixty-fourth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlv, no. 4 (8 Feb. 1884), p. 173; Common, Stellar photography, p. 22.
 11. Common, 'Stellar photography', p. 23.
 12. 'Rept. of the council to the sixty-fourth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlv, no. 4 (8 Feb. 1884), p. 173; 'Rept. of the council to the sixty-seventh a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlvii, no. 4 (11 Feb. 1887), pp 160-61; 'Rept. of the council to the sixty-ninth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlix, no. 4 (8 Feb. 1889), p. 203.
 13. 'Rept. of the council to the seventieth a.g.m. of the soc.' in Mon. Not. of the R.A.S., l, no. 4 (14 Feb. 1890), p. 211.
 14. 'Rept. of the council to the fifty-fourth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xxxiv, no. 4 (13 Feb. 1874), p. 180; 'Rept. of the fifty-eighth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xxxviii, no. 4 (8 Feb. 1878), p. 185; 'Rept. of the council to the sixty-second a.g.m. of the soc.' in Mon. Not. of the

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15. 'Rept. of the council to the sixty-seventh a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlvii, no. 4 (11 Feb. 1887), p. 161; 'Rept. of the council to the seventy-third a.g.m. of the soc.' in Mon. Not. of the R.A.S., liii, no. 4 (10 Feb. 1893), pp 287-8; Moore, Astronomy of Birr castle, p. 64; 'Rept. of the council to the seventy-third a.g.m. of the soc.' in Mon. Not. of the R.A.S., liii, no. 4 (10 Feb. 1893), pp 296-7.
16. 'Rept. of the council to the sixty-eighth a.g.m. of the soc.' in Mon. Not. of the R.A.S., xlviii, no. 4 (10 Feb. 1888), p. 212; Common, 'Stellar photography', pp 22-5; Howard Grubb, 'On the choice of instruments for stellar photography' in Mon. Not. of the R.A.S., xlvii, no. 6 (6 April 1887), pp 309-14; Grubb, loc. cit., p. 311.
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