

The investigation of sudden deaths and the Tay Bridge disaster of 1879

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**Jur. Rev. 213* The number of deaths in a major modern engineering disaster of global interest remains uncertain. The evidence of the whole event provides an indication of how little involvement the civic authorities had in the aftermath.

The central part of the newly constructed Tay Bridge collapsed during a storm on the evening of Sunday 28 December 1879 and a train and carriages, with crew and passengers, fell into the river. It has been described as one of the most spectacular single events in the whole reign of Queen Victoria.¹ It has been assessed as “the most famous structural accident in British history”.² The great interest in the event throughout the UK and elsewhere was intense, not least as all iron bridges then came under suspicion.³ There is still international interest in the bridge.⁴

How many people died in the disaster? It is settled that there were no survivors.⁵ Otherwise, the true number of deceased is still unknown. An initial report, sent by railway employees to the company head office in Edinburgh in the immediate aftermath of the collapse, suggested that “nearly three hundred passengers, besides the company’s servants” had died.⁶ That erroneous figure was soon explained as the railway staff on hearing of the collapse counted the entire contents of a drawer where tickets were retained. The drawer, however, held all the tickets collected for that whole day.⁷ A newspaper account published immediately after the disaster included the figure of “200 casualties”.⁸

Assessing an accurate total of the deaths gives an insight into the nature of civic administration of mid-Victorian Scotland: the accident occurred soon after the period of 1830–1860 which has been said to be the pinnacle of the *laissez faire* state.⁹ No attempt seems to have been made in the investigation as to what might **Jur. Rev. 214* be inferred from the nature of the injuries to the deceased or any other surrounding evidence: there is evidence that one man had discarded heavy clothing in the knowledge of trouble ahead and apparently in expectation of swimming ashore.¹⁰ That does not seem quite consistent with the intense historic sense of the immediate nature of the disaster. Moreover, it was probably convenient administratively to record all the deaths due to the collapse of the bridge as drowning.¹¹

There may be more to the whole event than seems at first reading of the generally repetitious narratives. It has been argued that the conduct, administration and structure of the criminal law were all rendered characteristically moralistic by the

prominence of Calvinism and its associated regime of social discipline.¹² Might there be similar influences at work in the apparently minimalist response of the civic administration to these deaths? It is not unreasonable to ask the question in the context of the idea that descriptions of historical processes often suffer from one concealed assumption.¹³

The investigation of the deaths

There was by 1879 no office of coroner in Scotland.¹⁴ There had been periodic support for re-introduction with duties as in England.¹⁵ As a consequence of that absence, the causes of the deaths in the aftermath of the disaster required to be investigated by the procurator fiscal as part of their ordinary duties as the local public prosecutor.¹⁶ The established practice was to investigate deaths and accidents resulting in deaths with a view to discovering all the facts.¹⁷ The procurator fiscal never made an investigation for the purpose of ascertaining “a scientifically accurate cause of death”; as soon as they were satisfied that there was no criminal aspect no further proceedings were taken on their part.¹⁸

The duties of the procurator fiscal were contained in regulations sent out periodically from the Crown Office, in Edinburgh, and these were regarded as confidential although they were on one occasion published to refute misleading suggestions about the system in Scotland.¹⁹ The requirement placed on the procurator fiscal to investigate sudden deaths was revised and contained in the “Book of Regulations”, the new version of which had been issued by the Crown Office in Edinburgh to all procurators fiscal of counties in 1868.²⁰

The procurator fiscal was required to investigate all instances of death from accident and all of sudden death. Whenever, in the opinion of the procurator fiscal, a written medical report was necessary for the due consideration of these types of death then such a report was to be obtained from a qualified medical practitioner.²¹ It was not necessary in every case

”to adduce medical evidence as to the cause of death. When the character of the injuries sustained leaves no possible doubt that the subsequent death was due to the accident, as where a man’s head is severed from his body— such evidence is useless”.²²

There was a distinction in practice between a known death from an accident and a sudden death, as contrasted with the discovery of a dead body. In the latter category, where the discovery of a dead body came to the knowledge of the procurator fiscal it was his duty to obtain from a qualified medical practitioner a written report relative to the cause of death. Further inquiry might be required in regard to the discovery of the body and the death of the individual.²³

The law and practice, as it then was, envisaged a private inquiry albeit with interviews with nearest relatives and thereafter a report to the Crown Office in Edinburgh. Such police as there were in the county may have provided statements from witnesses. The procurator fiscal had the authority to summon witnesses to his office to either clarify the detail of the statement taken by the police, or to take a new statement or one in the place of that of the police. Either way the procurator fiscal was engaged in obtaining a precognition, a written note or statement of evidence. The whole approach to the investigation of sudden deaths in Scotland was essentially that of “an investigative strategy that required a viewpoint independent of narrow partisan perspectives”.²⁴

The law requiring the registering of births, deaths and marriages was passed for Scotland in 1854.²⁵ The Act of 1854 placed a duty, by s.40, on the procurator fiscal in every case in which a precognition “touching the death of any person” was taken. The relevant registrar was to be informed of the **Jur. Rev. 216* particulars of the person required by the 1854 Act and the registrar was required, without requiring the procurator fiscal of the county to sign the register, to make the entry accordingly and also state that the procurator fiscal was the informant.

There was in 1879 in Scotland no authority in law for a public hearing in open court for the public to attend. The court of inquiry that sat in Dundee within a week of the collapse of the Tay Bridge had been authorised by the Board of Trade in terms of [s.7 of the Regulation of Railways Act 1871](#). The remit in law of that statutory inquiry was to consider the causes of and circumstances attending the incident.²⁶

The Lord Advocate, the senior Law Officer in Scotland, did not appear at the court of inquiry but he was represented by the procurator fiscal.²⁷ The responsible local official in 1879 was the Procurator Fiscal for the County of Forfarshire in which the city of Dundee was situated. The office holder was J. Boyd Baxter, assisted by William B. Dunbar. The latter attended only at Dundee in order to “watch the case” for the Lord Advocate but he did not ask questions although at the outset was invited to

do so if he wished.²⁸

The number of deaths

The last stop for the train before the bridge was two miles away at St Fort station. In that regard the official inquiry heard from the employees of the North British Railway Company who had last dealt with the train at St Fort. That train comprised an engine and tender and pulled behind it were six carriages.²⁹ The arrangement of carriages is a matter yet to be resolved with some dispute at the time.³⁰

The three railway employees who gave brief evidence at the official inquiry were William Friend, a ticket collector, Alexander Inglis (sometimes given as “Ingles”), an employee there also, and Robert Morris, the station master at St Fort. It appears that Friend went to the carriages nearest the engine and Inglis went to the other end and Morris and Inglis worked their way towards the centre of the train, where it seems Morris had started.

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The practice was to collect or “take up”, the phrase the railway staff used, the tickets for the passengers who were to get off at Dundee. One historian has observed:

”It was the custom, with such trains as this, and at such times, for the staff of St Fort to collect the tickets of all passengers terminating their journey at Dundee.”³¹

No source is cited for this custom which in any event begs the questions: why did such a custom of such short duration exist so soon after the bridge was opened and what was expected of the Dundee staff, if any were then on duty?

Alternatively, and this is not in keeping with “custom”, it may have been done on that occasion due to the unserviceable nature of the Taybridge Station at Dundee due to extreme weather on the night of the disaster.³² Those passengers who intended travelling on beyond Dundee to Broughty Ferry or returning back over the bridge to Newport were allowed to keep their tickets: this is one aspect that led to uncertainty. The fatal train would not in the ordinary course of a journey go from St Fort in Fife to Newport, Fife, so passengers for the latter destination would be required to cross the Tay Bridge and transfer to a waiting or a local train in Dundee to return back over the bridge to travel on a different line to Newport.³³

(i) The engine and tender

It was beyond doubt that there were only an engine driver and a fireman on the engine. The station staff did not in their evidence give any indication of having conversed with the driver and fireman, but the presence of both employees was confirmed by sight.³⁴

(ii) The passenger carriages

William Friend, the ticket collector, said that he went to the first and second carriages in the line after the engine. These were both third class carriages.³⁵ It seems a reasonable inference from his answers to the questions that he did not know how many tickets he himself had collected: he merely answered that 56 tickets were collected altogether.³⁶ He was asked if that number of tickets represented 57 people and he responded by asking if the question included children. When he was told that it did, he said that he supposed that there were 57 people.

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The implication of the exchange seemed to be that tickets for children were torn in half but that was not actually said to be the practice generally, or done on this occasion.³⁷ At the conclusion of his brief evidence, Mr Friend agreed with the summary that 56 tickets had been collected (which figure included two half tickets) by all staff and that five or six tickets had been seen for passengers travelling on to Broughty Ferry.³⁸

Alexander Inglis said that he went to the second class carriage, then to the third class carriage and then to the first class carriage.³⁹ He said that he collected all the tickets he could and that four passengers were left to keep their tickets as they were intending to travel to Newport.⁴⁰ Mr Inglis handed all his collected tickets to William Friend.⁴¹ Mr Inglis confirmed that there was no passenger in the first class carriage.⁴²

Robert Morris, the station master, went to three of the compartments of a third class carriage that was between a second class carriage and the first class carriage.⁴³ He seems to have only collected four tickets.⁴⁴ The ambiguity in the questions makes it

uncertain as to which carriages the four tickets were collected in. He did not collect one particular ticket which was shown to him as that passenger was travelling to Newport.⁴⁵

Mr Morris was clear that he gathered in all the tickets that had been collected including those by the other staff and he (Morris) tied them up.⁴⁶ He asserted that the station staff had only collected Dundee tickets of which there were 56 in total.⁴⁷ On further questioning he accepted that that total included two half tickets so the total was 57 people on the train along with others from whom tickets had not been collected as they were travelling on to other destinations.⁴⁸

(iii) The guards van

It seems to be beyond doubt that there were two company employees in the guards van, and also a mail guard. Two additional company employees were present as part of their staff entitlement to free journeys and were not there in the course of their employment.⁴⁹

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Contemporary discussions about the total

One newspaper account had under the heading, “List of Officials and Passengers”, referred to the number of tickets collected from the train: “We have been supplied officially with the following list of tickets collected.”⁵⁰ The “official” source is not given but presumably it meant the railway company. The total was 56 collected with 13 others noted and six railway employees who did not require tickets. Thus it would seem that a working total of the time would seem to have been 75 people missing.

The court of inquiry first sat in Dundee a mere five *days* after the disaster. The peremptory questions asked of apparently taciturn railway employees did not assist much in resolving authoritatively the matter of the number of deaths. These witnesses were company employees being asked about their employers’ business in a deferential age and in a public court attended by the press in large numbers and so soon after the event they may have still been in a state of shock.

In the course of his evidence on 3 January 1880 Robert Morris provided the court of inquiry with a list of tickets collected. The total of deaths, and at that point missing people, was hardly clear during the evidence of Morris. At the conclusion of the evidence of Morris, Mr Rothery, a commissioner, commented: “As I understand it, there were 72 people, including the Company’s servants: or 73 is it?”⁵¹ Mr Trayner, counsel to the inquiry, asserted without explanation: “Taking it at the most, you may call it 72.”⁵²

The list produced by Mr Morris was said to have “a clerical error”, but what that was remained unspecified in the subsequent record of the questions and answers.⁵³ At any rate, a printed list was later published as part of the documents annexed to the official report. That list was dated 2 January 1880 and it would seem that it might be different in content to that handed in at the inquiry. The printed list shows a gross total of 57 tickets collected. The footnote to the printed list is in the following terms:

”Besides the tickets collected, I issued five 3rd class tickets to Newport, which were not collected. The collector states that he examined a few Broughty Ferry tickets, five or six, and two season tickets.”

The inference seems to be that five people got on at St Fort to go to Newport (via Dundee). That point was not made in the evidence before the inquiry. Moreover, nothing much was asked of the two season ticket holders who presumably retained their tickets for future use.⁵⁴

Further, a different newspaper report on the day after the disaster narrates how a traveller who was to be met at Dundee was thought to be on the train. ***Jur. Rev. 220** However, J.T. Chatterton Baxter and two others had decided to leave the fated train at the last stop before the bridge. They were:

”... afraid that an accident might happen on account of the unparalleled force of the storm, he and two companions would not cross the Bridge, but went to Newport, intending to cross over by steamer. As the steamer did not cross over to Dundee after they arrived at the pier, they were obliged to stay ... all the night at Newport.”⁵⁵

Nobody at the court of inquiry seems to have asked any of the railway staff about travellers who actually or might have

alighted at St Fort and, if so, whether tickets were taken from them. Thus J.T. Chatterton Baxter and at least his two unnamed companions may possibly have handed their tickets to the railway staff, or perhaps only some of the three did so. That meant that the Dundee tickets “taken up” may have included a few for individuals who had *not* been on the train at the time of the collapse. There may also have been others who did as Chatterton Baxter and his companions might have done and, for entirely legitimate reasons such as intending to make return journeys, retained their tickets.

The question of deaths did arise tangentially at the hearing of evidence on Wednesday 21 April 1880. Mr Henry Law, a civil engineer, had been commissioned to inquire and report on engineering aspects of relevance to the court of inquiry.⁵⁶ It was a critical part of the technical calculations to know the weight of the whole train as carried by the bridge. Other engineers had offered their views.⁵⁷ Mr Law thought that the other engineers were

”under a little misapprehension; they have assumed that the whole of the passengers were distributed through the third-class carriages; but the return handed in by Mr Morris shows that in the second class carriage five tickets were collected; that two tickets were exhibited as belonging to season ticket holders, and one other ticket was exhibited making eight passengers”.⁵⁸

It seems to be a reasonable inference from the foregoing that the list handed in by Mr Morris five days after the disaster showed a reference to *eight* second class ticket passengers: the printed list being part of the official report produced months later shows *six* such passengers.

It was noted by Mr Law that the other engineers had allowed for 70 passengers in calculating the total weight. Mr Law had decided on a total of 74: **Jur. Rev. 221*

”From the return handed in by Mr Morris, it would appear that there were 50 third class tickets collected; five third-class tickets were issued for Newport which were not collected; and six for Broughty Ferry which were not collected, which made a total of 61 persons, because I have looked upon the two half tickets as representing one person.”⁵⁹

In passing, again, the printed list shows 51 third class tickets as having been collected.

The precise significance of two half-tickets was never explored in evidence: it might only have taken one question. The practice about children was never clarified: one historian says children were not issued with tickets.⁶⁰ Mr Law confirmed his approach, perhaps merely for an assessment of weight of the train, as two half-tickets representing one person:

”There were five second-class tickets collected; there were two season tickets and an exhibit ticket which would make eight; the eight added to the 61 [third class tickets] would make 69; then there were three guards, the fireman and the engineer, making a total of 74. Those I have taken as distributed in this manner — 2 upon the engine, 61 in the third-class carriages, eight in the second-class carriage and three in the luggage van.”⁶¹

Despite some questioning by members of the court, Mr Law was adamant that the correct passenger total was 74. For the purpose of the calculations Mr Law distributed the third class ticket holders as being 20 people in the first two third class carriages and 21 in the third. That appears not to be based on any evidence but merely a pragmatic decision. He assessed the total weight of the whole train as 120 tons.⁶²

The commissioners of the court of inquiry paid most attention to the engineering matters when reporting. Mr Rothery in his report did advert to the deaths:

”We were told that there were in the train at that time [the time of the accident] 57 passengers for Dundee, 5 or 6 for Broughty Ferry, 5 for Newport, 2 season ticket holders, the engine driver, stoker and guard, and 2 other guards, making 74 or 75 persons in all.”⁶³

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The literature: numerical assessment

The Tay Bridge disaster resulted in the largest number of fatalities of a British railway accident.⁶⁴ The numerical variations arise because there is a difference between a number that represents the best estimate of deaths and the number of known deaths. Contemporary observers and historians cite figures without making the difference clear, although the earlier a figure

was given the less sure it was that all investigations had been concluded and the evidence made available. It is well known that one body was found on 13 March 1880, three months after the disaster. Another was recovered on the north coast of Scotland many miles away. However, one historian has said that no one knows precisely how many lost their lives in the disaster.⁶⁵ The absence of efforts to investigate the point is remarkable. With these provisos in mind, reference might be made to the manner in which the total figures were expressed in printed form numerically or in plain language by the different commentators.

The *contemporary* estimates of the loss of life, apart from those given at the court of inquiry, included: 60⁶⁶; “about 80”⁶⁷; and “the fact is undoubted that between 75 and 100 have been lost”.⁶⁸ The *historical* estimates include: “59”⁶⁹; various figures in the 60s⁷⁰; various figures in the 70s⁷¹; and various figures in the 80s.⁷² A single book can cite different figures, e.g. 72 and 76.⁷³ The totals in historical works are usually qualified, with “some” or “about”. Further, the use of the word “and” is not qualified so it is difficult to know, for example, if “passengers and crew” is intended to be read conjunctively or disjunctively.

The difference in descriptions is notable: no standard terminology is used, most obviously “passenger” is usually a description of fare paying members of the public, but occasionally the term is applied to everyone on the train, including **Jur. Rev. 223* employees. The uncertainty as to children remains unresolved: the numbers vary and the requirement for a ticket for each was not settled either.

The most recent narrative history of the disaster refers to “some other accounts”, unspecified, giving the total of deaths as 75. That figure has been revised upwards to possibly 85

”because research over the years has revealed another possible ten casualties, most of whom were children under 5 years old and consequently not requiring a ticket when travelling with the rest of their families, so they didn’t [sic] show up as passengers from the ticket count. Also railway employees like [sic] George Ness for example, travelled free on their workmen’s passes and weren’t [sic] counted”.⁷⁴

Discussion

The absence of meaningful investigation in regard to the deaths associated with the Tay Bridge disaster in 1879 remains remarkable to modern perceptions. The over-arching point in a hierarchical system of state authority is that a high premium is placed on certainty of decision making.⁷⁵ Such certainty was attained for the Tay Bridge disaster in that all deaths were certified as the person known or believed to have been involved as having drowned.

The numerical uncertainty has been acknowledged by modern writers.⁷⁶ The doubt lingers and is carried forward with each contribution: one recent historian provides a list of 60 names.⁷⁷ The publication specifically directed to discovering the details of victims of the disaster gives 59 as the number of people who died.⁷⁸ Recently, it was suggested the final death toll may be *less* than reported.⁷⁹ Which reported “final” death toll is being referred to is not made clear, but reliance is placed on a list published at an unspecified date and for which no source is provided but is referred to as “the Dundee Police” list of 64 names.⁸⁰

The pathos of the whole event would seem still to be a compelling factor: a commercial postcard showing the montage of tickets collected at St Fort from the passengers is frequently reproduced in the literature.⁸¹ No writer on the subject of the collapse of the bridge, however, has sought to explain the provenance of all the tickets in the photograph, or offered an analysis of what it is that **Jur. Rev. 224* the tickets show, or might prove. The tickets seem to have station names on them and are individually numbered.

There is thus no definitive total of the number of deaths, not least because at the time of the incident there was no official with the clear responsibility for assessing and recording formally the number of the deceased. The procurator fiscal in accordance with established practice in Scotland was required to investigate to see if criminality was in issue. Once any criminality was excluded local responsibility ended and the matter was taken over by the Imperial Government. The latter concentrated exclusively on engineering issues.

It would seem, perhaps, on all the available evidence now that the best way presently of describing the deaths is that, first, 46 people are known to have died as their bodies were recovered and they were known to have been travelling on the fateful

train journey. Secondly, there were 13 others who were known similarly to have been travelling on the same train and yet remains were never discovered.⁸² Presumably nearest relatives or friends were able to show to the police or the procurator fiscal that the missing deceased had been on the train. The deaths of these 13 people were thus registered formally although their bodies were never recovered.⁸³

There remain an unknown and now unascertainable number of people whose death went unrecorded presumably because their bodies were never recovered and nobody came forward to identify or specify a particular person as having been on the train and missing. One historian said boldly that 29 bodies were never recovered.⁸⁴ That argument leaves 16 unknown people in excess of the 13 known travellers whose remains were never discovered and whose deaths were never recorded formally.

Comparatively recent technical discussion around the engineering questions produced differing professional views.⁸⁵ Remarkably, there was no consequential litigation as any claims that might have arisen were settled privately by the railway company.⁸⁶ The unilateral and peremptory official investigations, “the archenemy of adversary procedure”,⁸⁷ ended the quest for certainty as to the causes and number of the deaths. It is unlikely that a true figure can now be attained.

Concluding remarks

The nineteenth century procurator fiscal investigated sudden, suspicious and unexplained deaths and he was not required in discharge of the duties of office **Jur. Rev.* 225 to carry out, as some may have wished, a general management responsibility of industrial life. There were alternative tensions:

”Facts needed to determine the propriety of state intervention may be damaging to the self-interest of private individuals, giving them ample reason to hinder rather than facilitate the discovery of such facts.”⁸⁸

The disaster shows how matters were viewed in a commercially-driven state with a deferential populace and one which coincidentally seemed not to countenance public ceremonies of remembrance. The procurator fiscal had free rein to investigate the deaths, he could make any or as few inquiries as he liked and in private, he was unencumbered by rules of evidence and he could draw his own conclusions. Yet there was still a theological background that has gone unexplored and which informed the view of the authorities in Scotland.

First, the engineering collapse was attributed to the work of one man and public opinion vilified Sir Thomas Bouch the engineer who had designed the bridge and overseen the construction. Such criticism was hardly of the nature that allowed the church to hold him or others morally culpable in the manner that the criminal law might otherwise have been used for.⁸⁹ Secondly, the medical cause of death of drowning for each person was assessed by a doctor and on such a matter there seemed to be no public issue on the point. The earlier complementary aims of moral discipline and the maintenance of law and order were irrelevant in the context of an industrial event of the magnitude of this collapse.⁹⁰

Finally, the loss of life, aggravated by travelling on a Sunday, doubtless amounted to the religiously minded of the time as a direct sense of God’s intervention in the daily events of life.

”In the sixties of the last [the nineteenth] century, if there were a great train crash, the occasion was at once the subject of sermons, whether to remind men of judgment and of mortality, or to attempt some theodicy of providence and suffering.”⁹¹

With such contemporary suggestions of theodicy, the vindication of the divine attributes particularly holiness and justice, in establishing or allowing the existence of physical and moral evil, there was a very strong suggestion of an intervention for a greater purpose.

The investigation of sudden, suspicious and unexplained deaths came by a means as yet unexplained fully to be in the nineteenth century the responsibility of the procurator fiscal. The moralistic aspects of the criminal law of Scotland required investigation into deaths to try to discover whether there was a crime as **Jur. Rev.* 226 a root cause of the death. If crime was identified then the accused would then be dealt with appropriately. If crime was excluded then the incident leading to death was, as a matter of Providence, explained or to be regarded as an instance of an arrangement or intervention by God for His purpose.

To understand a country and its people one needs to know what the people believe.⁹² The same test may well apply to their

attitude to what constitutes crime and also what was to be done in the event of sudden, suspicious and unexplained death. In the face of what was thought of by many as divine intervention there was little need for the civic administration to linger overly long on details such as numbers of the deceased. In the intensely theological sphere of influence where life meets death, it was probable in the mid-Victorian era that the existence of a coroner's court, or further investigation by the procurator fiscal, would probably be seen widely then as not making much difference. Such a theological approach, however, could not be sustained in an increasingly industrial environment.

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Footnotes

- 1 *Jack Simmons, The Victorian Railway (London: Thames and Hudson, 1995), p.217.*
- 2 *T. Ruddock, "Bridges" in K. Veitch (ed.), Scottish Life and Society: A Compendium of Scottish Ethnology, Transport and Communications (Edinburgh: John Donald, 2009), p.587.*
- 3 *Simmons, The Victorian Railway (1995), pp.28, 217.*
- 4 *Arnold Koerte, Two Railway Bridges of an Era: Firth of Forth and Firth of Tay: Technical Progress, Disaster and New Beginnings in Victorian Engineering (Basel: Birkhauser Verlag, 1991).*
- 5 *P.F.G. Ransom, "Railways to 1914" in Scottish Life and Society: A Compendium of Scottish Ethnology, Transport and Communications (2009), p.398.*
- 6 *John Thomas, The Tay Bridge Disaster: New Light on the 1879 Tragedy (Newton Abbot: David and Charles, 1972), p.101.*
- 7 *Thomas, The Tay Bridge Disaster: New Light on the 1879 Tragedy (1972), p.101; Charles McKean, Battle for the North: The Tay and Forth Bridges and the Nineteenth Century Railway Wars (London: Granta, 2007), p.171, fn.5.*
- 8 *Robin Lumley, Tay Bridge Disaster: The People's Story*

- (Stroud: *The History Press*, 2013), p.168.
- 9 *Graeme Morton, Unionist Nationalism: Governing Urban Scotland, 1830–1860* (East Linton: Tuckwell Press, 1999), p.46.
- 10 *Murray Nicoll, Clare Nicoll and Grant Buttars, Victims of the Tay Rail Bridge Disaster of Sunday 28 December 1879* (Dundee: Tay Valley Family History Society, 2005), p.84.
- 11 *Nicoll, Nicoll and Buttars, Victims of the Tay Rail Bridge Disaster* (2005), p.76.
- 12 Chloe Kennedy, “Criminal law and religion in post-reformation Scotland” (2012) 16(2) Edin. LR. 178.
- 13 *O. Chadwick, The Secularisation of the European Mind in the Nineteenth Century* (Cambridge: Cambridge University Press, 1975), p.3.
- 14 *Robert A. Houston, The Coroners of Northern Britain, c. 1300–1700* (Basingstoke: Palgrave Macmillan, 2014).
- 15 Anonymous, “The ‘Edinburgh Review’ on Scottish Law” (1858) 2 *Journal of Jurisprudence* 555.
- 16 W. Reid, “The Origins of the Procurator Fiscal in Scotland”, 1965 *Jur. Rev.* 154.
- 17 *Henry H. Brown, The Procedure in Accident Inquiries and Investigations According to the Law of Scotland* (Edinburgh: T&T Clark, 1897), p.12.
- 18 H.H. Brown, “Special Lecture”, 1914 *S.L.T. (News)* 66.
- 19 Anonymous, “The ‘Edinburgh Review’ on Scottish Law” (1858) 2 *Journal of Jurisprudence* 555, 556–557.
- 20 *Crown Office, Book of Regulations* (Crown Office, 1868), *National Records of Scotland ref.AD 5/11, Pt I Title II regs 2, 3.*

- 21 *Crown Office, Book of Regulations, Pt I Title II reg.4.*
- 22 *Brown, The Procedure in Accident Inquiries and Investigations According to the Law of Scotland (1897), p.13.*
- 23 *Crown Office, Book of Regulations, Pt I Title II reg.5*
- 24 The phrase is from *Mirjan J. Damaska, The Faces of Justice and State Authority (New Haven: Yale University Press, 1986) p.161.*
- 25 A. Cameron, “The Establishment of Civil Registration in Scotland” (2007) 50 *Historical Journal* 377.
- 26 *Court of Inquiry, Report of the Court of Inquiry, and the Report of Mr Rothery (HMSO, 1880), Parliamentary Papers Vol.xxxix.*
- 27 The absence of the Lord Advocate is probably explained simply by the point that no law or action or omission of the government however defined was being called into question.
- 28 *Select Committee on the North British Railway (Tay Bridge) Bill, Report from Select Committee on the North British Railway (Tay Bridge) Bill (HMSO, 1880)* (includes minutes of evidence from inquiry), p.1. Most of the inquiry after a few days in Dundee was in London.
- 29 Minutes of evidence, Q.43 and 44 (William Friend) and Q.118 (Robert Morris).
- 30 See diagram reproduced in *David B. Swinfen, The Fall of the Tay Bridge (Edinburgh: Mercat Press, 1994), p.72* and *Andre Gren, The Bridge is Down! (Kettering: Silver Link Publishing, 2008), p.viii.* For the view of most historians see *Thomas, The Tay Bridge Disaster: New Light on the 1879 Tragedy (1972), pp.82–83; John Prebble, The High Girders (London: Secker & Warburg, 1956), pp.114–115.*

- 31 *Prebble, The High Girders (1956), p.122.*
- 32 *Swinfen, The Fall of the Tay Bridge (1994), p.2.*
- 33 *Swinfen, The Fall of the Tay Bridge (1994), p.2.*
- 34 Minutes of evidence, Q.138.
- 35 Minutes of evidence, Q.49.
- 36 Minutes of evidence, Q.50, Q.51.
- 37 Minutes of evidence, Q.53, Q.55.
- 38 Minutes of evidence, Q.65, Q.69, Q.70.
- 39 Minutes of evidence, Q.90, Q.91, Q. 92.
- 40 Minutes of evidence, Q.98, Q.99.
- 41 Minutes of evidence, Q.101.
- 42 Minutes of evidence, Q.107.
- 43 Minutes of evidence, Q.121.
- 44 Minutes of evidence, Q.123.
- 45 Minutes of evidence, Q.124.
- 46 Minutes of evidence, Q.127.
- 47 Minutes of evidence, Q.132, Q.133.
- 48 Minutes of evidence, Q.134.
- 49 Minutes of evidence, Q.135, Q.136, Q.137.
- 50 *The Scotsman, 30 December 1879, p.5.*
- 51 Minutes of evidence, Q.150.
- 52 It is to be recalled that the figure was suggested very soon after the collapse.
- 53 Minutes of evidence, Q.12,805.
- 54 Minutes of evidence, Q.63.
- 55 *The Dundee Courier and Argus, 31 December 1879, p.2,* see Dundee City Council website at: <http://www.leisureandcultured>

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- 56 Minutes of evidence, Q.12,508.
- 57 Minutes of evidence, Dr William Pole, p.460; Allan Stewart, p.489.
- 58 Minutes of evidence, Q.12,802.
- 59 Minutes of evidence, Q.12,803.
- 60 *McKean, Battle for the North: The Tay and Forth Bridges and the Nineteenth Century Railway Wars (2007), p.355, fn.14.*
- 61 Minutes of evidence, Q.12,804.
- 62 Minutes of evidence, Q.12,806, Q.12,807.
- 63 *Court of Inquiry, Report of the Court of Inquiry, and the Report of Mr Rothery, p.21, para.17.*
- 64 *Peter R. Lewis, Beautiful Railway Bridge of the Silvery Tay: reinvestigating the Tay Bridge disaster of 1879 (Stroud: Tempus, 2004), p.9.*
- 65 *Swinfen, The Fall of the Tay Bridge (1994), p.101, fn.1.*
- 66 *Swinfen, The Fall of the Tay Bridge (1994), pp.99–100.*
- 67 *The Engineer, 2 January 1880, p.1.*
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- 70 *Gren, The Bridge is Down! (2008), p.7; Nicoll, Nicoll and Buttars, Victims of the Tay Rail Bridge Disaster (2005), p.73; McKean, Battle for the North: The Tay and Forth Bridges and the Nineteenth Century Railway Wars (2007), p.171; Prebble, The High Girders (1956), p.123.*
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- 73 David W. Wragg, *The Race to the North: Rivalry and Record-Breaking in the Golden Age of Steam* (Barnsley: Wharncliffe Transport, 2013), pp.xi, 71.
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