

# REPRESENTATIONS AND REMEMBRANCES OF SCIENTISTS IN MANCHESTER

Raj Williamson Jones and Terry Wyke

It is entirely appropriate that Alfred Waterhouse's Manchester Town Hall should have attracted the attention of so many historians. 'King Cotton's Palace', as Colin Cunningham dubbed it, has much to tell us about Victorian Manchester.<sup>i</sup> One does not even have to cross the Rubicon of postmodernism to appreciate that one is looking at more than an extravagant gesture of civic pride. Even before reaching the great hall where Ford Madox Brown's much-studied murals provide a dramatic and highly selective account of the city's history, the building's vaulting spaces envelop the visitor in argument. These are especially loud when one considers the statuary. Statues commissioned of living politicians, such as Bright and Villiers, were important acts by a Liberal middle-class, conscious of their beliefs and achievements, and of the need to ensure that these were displayed prominently in the building's public spaces. The decision to turn the waiting area on the ground floor into a sculpture gallery - a Liberal Valhalla - extended their proprietorial argument into another important space. Tempting as it may be to read the Town Hall as an introduction to a political manifesto, there are, to repeat the Victorian cliché, other sermons in these stones. Immediately on entering the Town Hall, one passes between two marble statues: on the left is the seated figure of John Dalton and directly opposite is James Prescott Joule, the work of Sir Francis Chantrey and Alfred Gilbert respectively. Why do these two nineteenth-century scientists occupy such a strategic position in the city's principal public building?

This simple question is part of a much wider set of questions concerning the representation and memorialisation of scientists in the nineteenth century. As Ludmilla Jordanova has recently pointed out, we know comparatively little about the making of, and the cultural significance of, the public representations of the scientist.<sup>ii</sup> The creation and dissemination of public images of scientists, in the form of drawings, paintings, photographs and sculpture, have not been widely explored, paradoxically, even, by historians undertaking biographical studies. Patricia Fara's recent work on Newton is one of the few studies to analyse such images and demonstrate their connection with Newton's public reputation.<sup>iii</sup> This article begins by providing a preliminary examination of the largest and, possibly, the best-known images of Manchester's two leading scientists of the nineteenth century: the statues of John Dalton and James Prescott Joule. Analysts of Manchester's scientific community have had little to say about these statues.<sup>iv</sup> We argue that these were more than simple acts of commemoration; they also served the purpose of raising the status of science in Manchester and, in doing so, helped to re-define the city's public image, promoting a sense of its modernity.

## Chantrey's Dalton

It is not necessary to repeat the biographical details of John Dalton's life except to state that he was born in Cumberland, not Manchester, but having arrived in the town in 1793 at the age of 27 to teach mathematics and natural philosophy at Manchester New College, it was to be his home for the remaining fifty-one years of his life. The Manchester Literary and Philosophical Society, which he served in every capacity and finally as President for twenty-seven years, became the focus of his scientific activities. It was to this Society he propounded his famous theory of atoms in 1803. Dalton's time in Manchester coincided with the dramatic changes brought about by new technologies and industries, many with the active participation of his friends and colleagues in the Literary and Philosophical Society. Official recognition of the importance of Dalton's ideas came first from the French Academy of Sciences in 1816 and then the Royal Society which elected him to its Fellowship in 1822 and awarded him the Royal Medal four years later. He was made a Foreign Associate of the French Academy of Sciences in 1830 - one of only eight in the world, and the highest distinction in science. The British Association for the Advancement of Science, founded in 1831, showered him with honours. At Oxford he received a D.C.L., and Edinburgh gave him an honorary degree and the Freedom of the City. His friends procured a civil list pension of £150 for him in 1833. Quaker Dalton was now the most celebrated scientist of the age.<sup>v</sup>

It was at this time that the idea of commissioning a statue originated among his friends, conscious that his achievements had been recognised elsewhere but not in Manchester. Friends and former pupils, including his collaborator William Henry (whose son Charles became Dalton's official biographer), Dr S.A. Bardsley, Peter Ewart, the engineer, Peter Clare, Dalton's friend and later executor, and Rev. Dr Calvert, Dean of the Collegiate Church, were among those who set about organising a public memorial. It was an extraordinarily ambitious scheme in that they did not have in mind a 50-guinea portrait from a local artist, but a statue.<sup>vi</sup> The scheme was made public in August 1833 and within a short period of time the memorial committee had organised a canvass of the town's middle classes, raising more than £2,000. Support for the statue came not only, as one might have expected, from individuals associated with the town's various scientific societies - most obviously the Literary and Philosophical - but, more revealingly, from the wider business and industrial community.<sup>vii</sup> Individuals who were on different sides of those political and religious divides which historians have recognised as important in understanding the formation and dynamics of the middle classes in early nineteenth-century Manchester, came together to support the

project. The sum raised allowed the committee to commission a marble statue from the country's leading portrait sculptor, Sir Francis Chantrey. His fee of 2,000 guineas included a marble pedestal.<sup>viii</sup> Dalton agreed to sit for Chantrey and made the journey to the sculptor's London studio. Chantrey represented Dalton as a seated contemplative figure, dressed in academic robes, his right hand raised to his chin and a book in the other hand. Scientific apparatus and a scroll were placed around his feet. After some delay, the finished work arrived in Manchester in August 1838, where it was displayed in the Royal Manchester Institution, the town's grandest, if somewhat exclusive, cultural building. From the outset of the project the Institution's governors had indicated their willingness to house the statue.<sup>ix</sup>

Manchester's first major public statue was widely praised although it did not entirely escape criticism.<sup>x</sup> Located in Charles Barry's impressive entrance hall, it was one of the first original works to be seen by visitors, a notable exhibit in the Royal Manchester Institution's collection. When the British Association finally held their first meeting in the town in 1842, it was an object for visitors to seek out and admire. It was also a work that warranted notice in local guide books.<sup>xi</sup> The statue remained in the building until 1884, when it was decided, following the transfer of the Royal Manchester Institution to Manchester Corporation and its conversion into the City Art Gallery, to move it to the Town Hall. There it would be a 'noble addition to the Sculptors' Gallery.'<sup>xii</sup>



**Sir Francis Chantrey's marble statue of John Dalton in Manchester Town Hall**

### Theed's Dalton

Dalton's health deteriorated after 1837 and he was to die in Manchester on 27 July 1844. Quaker Dalton was not allowed a simple funeral. The authorities organised a public funeral for their most eminent citizen, a reported 40,000 people filing past his coffin in the Town Hall. It was public mourning on a scale usually associated with leading royalty or great military leaders. Predictably, after the funeral, discussions began on appropriate

ways for the town to mark his memory. Various ideas were suggested in the press, including a memorial clock tower in Piccadilly.<sup>xiii</sup> What was needed, it was argued, was a living, practical memorial rather than a statue that would deteriorate in the town's rain and smoke. In any case, Manchester already had Chantrey's Dalton. When the subject was discussed at a public meeting in October 1844, the nascent project centred on placing a 'simple and suitable memorial' over his grave and establishing a Dalton professorship of chemistry.<sup>xiv</sup> The idea of an educational memorial found favour among Manchester's scientific community, but the scheme was to falter. The only immediate and visible public tribute to Dalton was the naming of a new street after him.<sup>xv</sup> Some seven years later, an outdoor statue was erected but it was a private, not public, tribute. A seven-foot high Caen stone statue of Dalton was erected on the first-storey of a building on the corner of John Dalton Street and Deansgate: It was commissioned by the owner of the building, the Quaker, Peter Bowker.<sup>xvi</sup>

The idea of providing a public memorial to Dalton was revived in Manchester in 1853. Alderman William Neild, who had been one of Dalton's executors, was one of the individuals who helped rekindle interest in the scheme. Support, as in 1844, was to be found among members of the Manchester Literary and Philosophical Society. In proposing a new memorial there was a tangible sense of embarrassment over the failure of the earlier scheme. Initially, the new scheme had similarities with the original one: a memorial was to be placed on Dalton's grave in Ardwick Cemetery, and any additional money would be used to set up chemistry and mathematics scholarships at the recently-established Owens College.<sup>xvii</sup> A well-organised public subscription eventually collected some £5,300, of which only £232 was from the earlier scheme. The new scheme, however, underwent an important change when it was decided to commission another statue of Dalton which was to be located on the Piccadilly Esplanade, the city's premier public space. This open space in front of the Royal Infirmary was already the site of a recently unveiled memorial to Sir Robert Peel and plans for a monument to the Duke of Wellington were well advanced. It was agreed that the statue would be a bronze copy of the Chantrey Dalton in the Royal Manchester Institution.<sup>xviii</sup> The sculptor chosen was William Theed, an artist who was known in Manchester, having recently completed a marble statue of Humphrey Chetham in the cathedral. Theed's bronze copy was unveiled in Piccadilly in July 1855 by the mayor, Benjamin Nicholls.<sup>xix</sup> The statue cost some £900, leaving the bulk of the money collected to support the Dalton scholarships and prizes at Owens College.

### Theed's Watt

Theed's Dalton was soon joined by the statue of another scientist. Shortly after its installation in Piccadilly, the idea of a companion statue was made public. Its subject was to be James Watt. This was not the first time that Manchester had considered honouring the man whose inventions were already regarded as having been central to the creation of the 'metropolis of manufactures'. A subscription list for a statue had been opened in 1836 and a committee appointed to contact Chantrey, but no statue was commissioned.<sup>xx</sup> The idea of a Watt statue was revived in 1855, and, once again, it was members of the Literary and Philosophical Society who were the driving force in organ-

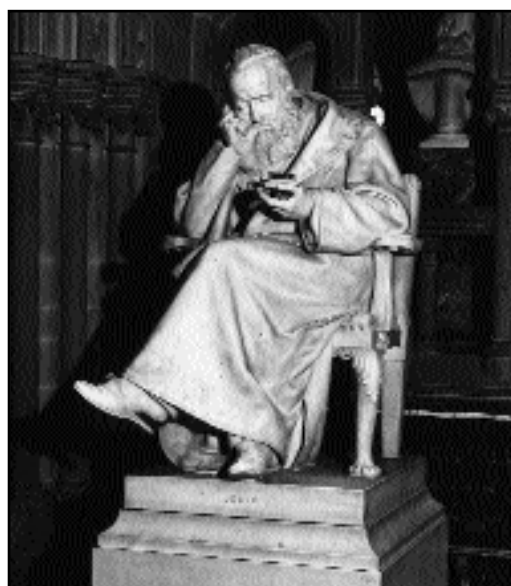
ising the scheme. A Watt Memorial Committee was formally established at a public meeting held in the Town Hall. It resolved that 'considering the immense influence of the discoveries of James Watt on the progress of society, and the beneficial application of them in this community, a statue ought to be erected in this city, in honour of his memory and services'.<sup>xxi</sup> Watt may not have been a Manchester man - his son James had worked for a time in Manchester and served as secretary of the Literary and Philosophical Society - but it was made clear that without his inventions the course of Manchester's remarkable recent history would have been very different. Among the speakers acknowledging Watt's originality as scientist, engineer and inventor was J.C. Dyer, who argued that the city might go further than a simple monument, and establish a Watt Institute to encourage a closer relationship between the mechanical sciences and industry.<sup>xxii</sup> Financial support came from other local bodies including the Manchester Chamber of Commerce, as well as from individuals and businesses, some of whose names had already appeared on the subscription list for the Dalton monument. Since the Watt statue was seen as a companion piece to the Dalton, the committee turned again to the sculptor, William Theed. This time he was requested to produce a bronze copy of Chantrey's statue of Watt in George Square, Glasgow.<sup>xxiii</sup> The completed statue was unveiled by the Manchester engineer and public figure, William Fairbairn, in June 1857, adding a new public sculpture to the itineraries of visitors to the Art Treasures Exhibition.<sup>xxiv</sup> Thus by 1857 Manchester displayed in Piccadilly, its most prominent public space, portrait statues of two of the greatest scientists and inventors of the modern age, powerful symbols of the worlds of science and technology, at whose junction had been released the forces which had made it the world's first industrial city.

### Gilbert's Joule

It was not until the 1890s that the city was to pay a comparable tribute to another of its scientists. James Prescott Joule was the man memorialised. Born on Christmas Eve 1818, James was the second son of a wealthy Salford brewer. Together with his elder brother Benjamin, he was educated by private tutors before studying for three years under John Dalton. Joule worked in the family brewery until the age of nearly 40, and carried out his scientific research in his spare time. His earliest research was on the then relatively new subject of current electricity, and he investigated its relationship with heat. This led him to the idea of energy conservation. The first public statement of this universal law was made by Joule at the age of 29 in a lecture delivered in St. Ann's Church Reading Room and published in the *Manchester Courier*. Joule was a skilful and accurate experimenter, and his measurement of the 'exchange rate' between heat and mechanical work laid the foundations of the science of energetics. The standard unit of energy is rightly named the 'joule'. This was not all of Joule's achievements. His collaboration with William Thomson, later Baron Kelvin of Largs, over the period 1852-62, did the groundwork for the technology of refrigeration. As for Dalton, the Literary and Philosophical Society occupied an important position in Joule's life. He joined the Society in 1842, became its Librarian in 1844, Secretary in 1846, Vice-President in 1851 and four times President between 1860 and 1879. The Royal Society elected him to its Fellowship in 1850, and he was increasingly an establishment

figure. In 1878 an appeal for a government pension of £300 for Joule was signed by virtually every notable man of science in Britain. Other public honours included degrees from Dublin, Oxford and Edinburgh.<sup>xxv</sup>

Unlike Dalton, there was no move to erect a public monument until after his death in October 1889. The principal impetus for a memorial came from the Literary and Philosophical.<sup>xxvi</sup> A public meeting in November 1889 agreed to erect a marble statue as a mark of the benefits stemming from his scientific researches.<sup>xxvii</sup> The influence of Chantrey's Dalton on the scheme became evident when the memorial committee expressed its intention of commissioning not one but two works: the first, a marble statue which would be a companion piece to the Dalton in the Town Hall, and, the second, a bronze copy to be located outdoors in the city. However, whilst the public subscription attracted support from the local business world, education, trade unions as well as the scientific community, the £2,500 raised, although a substantial sum, was only sufficient to provide the marble statue. The choice of Alfred Gilbert, the most extravagantly talented of English sculptors, indicated that the committee was intent on providing a portrait that would not be simply dismissed as a good likeness. Gilbert, no doubt spurred on by the idea that the statue would be placed close to, and thus invite comparison with, Chantrey's Dalton, responded by depicting the great scientist as a seated figure, holding a scientific instrument and deep in thought, but wrapped in a large dressing coat and wearing his slippers rather than in academic robes. He, of course, had to work from photographs rather than the live model. The completed marble sculpture was delivered to Manchester at the end of 1893.<sup>xxviii</sup> The memorial committee, keen that it should be shown off to best effect, proposed that both it and Chantrey's Dalton should be displayed on the principal landing of the Town Hall. The Town Hall Committee, however, could not be persuaded, and decided to place the two scientists facing each other in the vestibule. Joule's statue was unveiled in December 1893 by Lord Kelvin, whose warm tribute was based on personal knowledge acquired when they had worked together.<sup>xxix</sup>



Alfred Gilbert's marble statue of James Prescott Joule, Manchester Town Hall

## Cassidy's Joule

No outdoor statue of Joule was to be raised in Manchester city centre, but twelve years after the unveiling of Gilbert's statue, Joule's achievements were remembered by a memorial in Sale, a suburb of Manchester. Joule had moved to Sale in the late 1870s for reasons of his health, and a substantial house in Wardle Road was to be his home there for the rest of his life.<sup>xxx</sup> The idea of erecting a memorial to Joule in Sale was made public by the local council in 1901. To mark his connection with the district, it was proposed to build a meteorological tower in the recently opened Sale Park. A public appeal for funds was launched. Support came from members of the scientific community in Britain, Europe and the United States: 13 of the 68 individuals on the first subscription list were Fellows of the Royal Society. In contrast, the support from local residents was poor. Efforts to increase subscriptions by linking the memorial tower to the forthcoming coronation celebrations also proved disappointing.<sup>xxx</sup> This lack of support led to the scheme being revised, and the idea of the tower was replaced by that of a memorial bust. Under the chairmanship of the physicist, Dr Charles Lees of Owens College, fund raising was re-launched. The Manchester sculptor, John Cassidy, was commissioned to provide the bust. Cassidy depicted Joule reading a scientific paper to an audience, the subject of the lecture being related to his tangent galvanometer - the outline of the instrument being shown on the papers he was holding.<sup>xxxii</sup> The bronze bust, mounted on an elegant tapering pedestal, was placed in the park, where in October 1905 it was unveiled by Sir William H. Bailey, the president of the Manchester Literary and Philosophical Society. Bailey and other speakers paid generous tribute to the importance of Joule's discoveries for modern physics; less was said of his connections with Sale.<sup>xxxiii</sup>

By the early twentieth century it was possible for visitors to Manchester to admire a number of public memorials raised to honour its two greatest scientists. The Chantry Dalton and the Gilbert Joule in the Town Hall had the additional interest of being considered to be among the finest sculpture on view in the city. Both have remained there and have continued to be appreciated as important if stylistically contrasting works of public portrait sculpture carved by the leading British sculptors of the day.<sup>xxxiv</sup> Discussion of the commissioning and installation of the Dalton and Joule statues in Manchester should begin by recognising that they were part of a much broader movement of memorialisation in the long Victorian period. By 1914 most large towns could lay claim to at least one bronze or stone portrait statue, usually standing in a prominent square or inside a prestigious public building. In the early nineteenth century such tributes had been limited chiefly to royalty and military heroes, but this was to be widened to include other types: civic leaders, philanthropists, politicians, reformers, artists and scientists. Communities honoured scientists who, because of reasons such as birth, education or their research, were associated with the place. Joseph Priestley was the subject of three life-size statues: Birmingham (F.J. Williamson, 1874), Leeds (A. Drury, 1903) and Birstall (F. Darlington, 1912). Lord Kelvin was remembered by statues in Glasgow (A.M. Shannan, 1913) and in his birthplace, Belfast (H. Thornycroft, 1913). A stone statue was raised to Humphry Davy in Market Jew Street, Penzance in 1872 (T. and W. Wills). In the same year the chemist, Thomas Graham, was

remembered by a bronze statue in George Square, Glasgow (W. Brodie). William Theed the younger, whose work in Manchester has been noted, was also responsible for the heroic size statue of Newton in Grantham, unveiled in 1858. London, Birmingham, Leeds and Glasgow could all point to major public monuments celebrating James Watt. Manchester might have laid claim, yet again, to have been early in the field of providing public statues honouring scientists but it was by no means on its own.

In the hierarchy of public commemoration, the statue represented one of the highest forms of veneration, but the processes of making and siting such conspicuous public objects were concerned with other rhetorics.<sup>xxxv</sup> They embodied the beliefs and ideals of communities, or that section of a community, responsible for organising the memorialisation. And, as with those other sites of memory which have attracted the attention of historians, they presented through the individual or event commemorated a particular version of the past, a version which could acquire new meanings over time.<sup>xxxvi</sup> In the case of the statues discussed here, they had a particular significance for the local scientific community and for the middle-classes who came of age in the early nineteenth century to direct and shape the civic status and public image of Manchester.

Although the important part played by individuals and small groups of people in raising the Dalton and Joule monuments in Manchester should not be marginalised, the involvement of the Literary and Philosophical Society was particularly evident. To an extent, its presence was understandable given its position as the senior scientific society in the town and, of course, Dalton and Joule's long connection with it. In pursuing these commemorative projects, the Society was helping to strengthen the idea of Manchester as an important centre of science, whilst, at the same time, re-enforcing its own status. By the mid-nineteenth century, this was taking place when the very idea of the scientist and the scientific community was being transformed, changes which were to lead to professional scientists replacing the gentlemen of science. Scientific activity moved from the individual and the voluntary society to a university base. These changes were evident, as Kargon has demonstrated, in the Manchester Literary and Philosophical Society, though it is ironic given the Society's involvement in promoting public statues, that the publication of a paper on sculpture in its *Memoirs* revealed the division between the traditionalists and modernists among its own members.<sup>xxxvii</sup> The Society's concern with these public memorials was important in developing its role as the keeper of Manchester's scientific history, or, more precisely, a version of it in which the originality of the discoveries of both Dalton and Joule were to the fore. Dalton memorabilia were displayed in the Society's premises in George Street, and the Society played a central role in organising events, such as the Dalton anniversary celebrations of 1903 and 1966, which contributed to the enhancement of its own position, both locally and nationally. The 2003 celebrations to mark the bicentenary of Dalton's atomic theory similarly raised the profile of the Society.

But support for the public memorials for Dalton and Joule also came from outside the local scientific community. Indeed, the numbers of individuals involved and the large sums of money

subscribed to raise the three Manchester statues point to a wider involvement of the middle-classes. It was based on a number of perceptions, both of science and also of the town itself. Science was regarded as important by the town's emerging middle-classes for a number of reasons. It was recognised as a vital force in the new industrial society, ultimately responsible for the technologies which both defined and explained the far-reaching and continuing transformation of society. In short, science became inseparable from the powerful social idea of progress. While both Dalton's and Joule's researches did not produce a demonstrable technology, iconic machines that altered people's everyday lives, it was accepted that their researches had been of profound importance, opening up areas of scientific enquiry which allowed others to formulate and analyse problems more easily. Their memorialisation marked a further public recognition of the importance of science in society, a recognition that saw scientists cast, symbolically and literally, into the role of Victorian heroes.

No doubt, many people living in Manchester struggled to understand the significance of Dalton's and Joule's insights into the physical world, but they were willing to accept them as intellectual giants, who, moreover, could be regarded as illustrious citizens whose achievements had brought distinction to the town. Middle-class support for commissioning statues was certainly connected with concerns about the public image of Manchester. Negative perceptions of the city proliferated during and after the Industrial Revolution, multi-faceted representations in which the leitmotif was of a rough, unvarnished society in physical and moral disorder. In the second quarter of the nineteenth century, the middle-classes turned towards science, supporting it and using it, in part to provide a more positive image of Manchester. Science became an important cultural context through which the town represented itself and was represented by others. Science held out the possibility of a more structured and ordered world. Manchester may not have been the Athens of the North, but science, especially through the activities of those associated with the Literary and Philosophical Society, notably Dalton and William Henry, allowed it to raise its intellectual standing. The commissioning of the first Dalton statue is of particular interest in this context, in that support for it came because it was regarded by some individuals as a means of countering the town's bleak image. Its appeal, as we have noted, was such that it attracted support from individuals who were opponents in other public arenas. In using Dalton's celebrity in this way, it should also be remembered that not only was it the town's first major public statue, but it also celebrated a living individual. Public statues were, after all, usually posthumous monuments, canonising the dead not the living.<sup>xxxviii</sup>

If we accept that the commissioning of statues, most obviously to royalty, statesmen and military heroes in London, was part of a process which contributed to the forging of national identity in the eighteenth and nineteenth centuries, then the raising of statues in provincial towns helped determine local identities.<sup>xxxix</sup> Although we still have little understanding of what it meant to be a Mancunian in the nineteenth century, the commemoration in marble and bronze of particular philanthropists, churchmen and scientists in public places was an expression of pride which strengthened local identities.

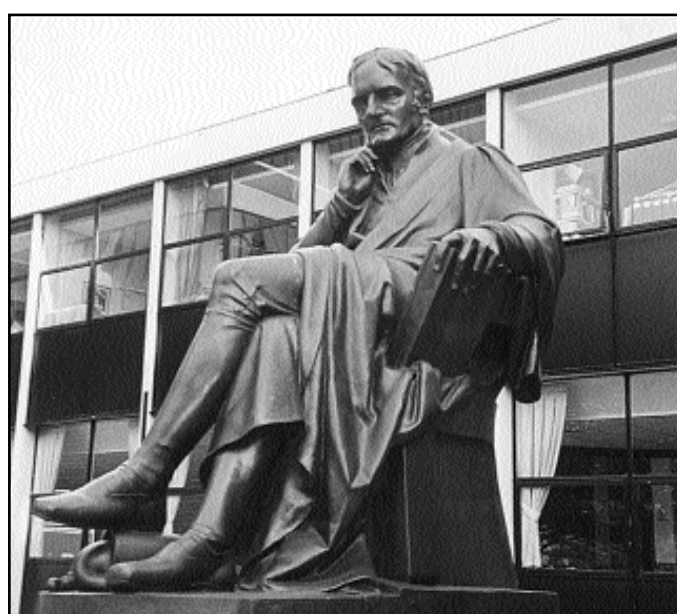
Monuments which perpetuated the name and achievements of an admired individual, placed the city in a favourable light. Dalton and Joule became part of a new and public historical narrative, figures representing important values in the new society. The raising of statues to scientists presented a revealing ideal type, an alternative model to that of the Manchester Man as the boorish bourgeois businessman whose world revolved around the making of money from cotton, a penny portrait much sketched on the banks of the Thames. It is rarely noted that whilst Manchester raised public statues celebrating the idea of scientific progress, no such public tribute was extended to even one of its many great cotton entrepreneurs, who had also played their part in the creation of Cottonopolis.

Support for public statues among the middle classes also came from the frequently-expressed assertion that such monuments were didactic objects, prompting the viewer to stop, ponder and reflect. Creating a portrait statue that was more than just a recognisable likeness, capable of stopping the passer-by in the street, was a challenge to the sculptor. In the case of portraying the scientist there was the additional test of expressing the power of the intellect without placing the individual in an uncharacteristic pose or surrounding them with numerous symbolic objects. Much depended on the skills of the artist engaged. As we have noted, in Manchester the funds available meant that memorial committees did not have to rely on the often limited talents of local sculptors. They were able to engage leading sculptors to provide their provincial monuments, artists whose stock work was of a high quality. Chantrey was the country's leading portrait sculptor and he succeeded in producing a statue of Dalton that was careful, precise and expressive in the terms of the neoclassical style in which he excelled. Alfred Gilbert was also an exceptional talent. He was, as the *Manchester Guardian* informed its readers, 'perhaps the most distinguished member of that little band of young and rising artists which makes the contrast between English and French sculpture something better than merely painful'.<sup>xl</sup> As a leading figure of the New Sculpture movement, his representation of Joule challenged the prevailing portrait conventions. It is difficult to judge how influential such images were, but we can acknowledge that they did provide a clear and definite image of the scientist which influenced and reinforced popular perceptions of science in the nineteenth century. Writers, notably Roslynn Haynes, have traced a more complex set of images in literature, in particular, identifying more contradictory and cynical representations of the scientist.<sup>xli</sup> Portrait sculpture presented a different type: the quiet contemplative scientist unlocking the mysteries of the physical world and doing so for reasons other than personal power, status or financial reward. It was an appealing role model to place on pedestals for the public to inspect and admire. Dalton and Joule obviously came from a different branch of the tree from which Victor Frankenstein and Henry Jekyll had fallen.

Assessments of the public response to and the influence these statues had must also take into account their location. Site selection was an issue which caused much discussion and argument among memorial committees. An appropriate location could reinforce the public meanings of a statue, whereas an unsuitable one could easily dilute them. The locations of the marble Dalton and Joule statues were significant. Chantrey's

Dalton was displayed prominently in Manchester's premier cultural building before being removed to its principal civic building. The decision to position the statues of Dalton and Joule so that they were the first objects people saw on entering the Town Hall was a public declaration linking the city and science, associating the city and genius, a forceful reminder in King Cotton's Palace that the achievements of Manchester went far beyond the spinning and selling of cotton. A similarly powerful message was on view when the Dalton and Watt statues were sited in Piccadilly. Their visual presence was to change in the twentieth century, but for more than forty years, until the arrival of Onslow Ford's Victoria memorial, they occupied the central position on the Piccadilly Esplanade, reinforced by, and reinforcing its importance as a civic space. They were significant elements in a visual infrastructure which itself was one of the most impressive and forceful images constructed by Victorian Mancunians of their city.

The subsequent history of Theed's Dalton suggests a more varied response to public sculpture and the historical meanings associated with it. Following the demolition of the Infirmary in 1909, both the Watt and Dalton statues lost some of their visual presence, and, in the following years, they and the other statues in Piccadilly were threatened with banishment to suburban parks. Early in the Second World War calls were made for them to be included in the city's drive for scrap metal.<sup>xliii</sup> But, they survived. However, in 1966, ironically the bicentenary of Dalton's birth, the construction of an electricity sub-station resulted in the removal of his statue.<sup>xliiii</sup> Rather than keeping it in Piccadilly, it was decided to re-locate the statue outside of the main entrance of the new John Dalton College of Technology (now part of Manchester Metropolitan University) in Chester Street.<sup>xliiv</sup> The statue remains there, a somewhat isolated monument following extensions and changes to the original building. The opportunity of returning Dalton to Piccadilly and placing it, once again, alongside its companion statue was not taken up in a scheme that involved the radical landscaping of Piccadilly Gardens in 2001-2.

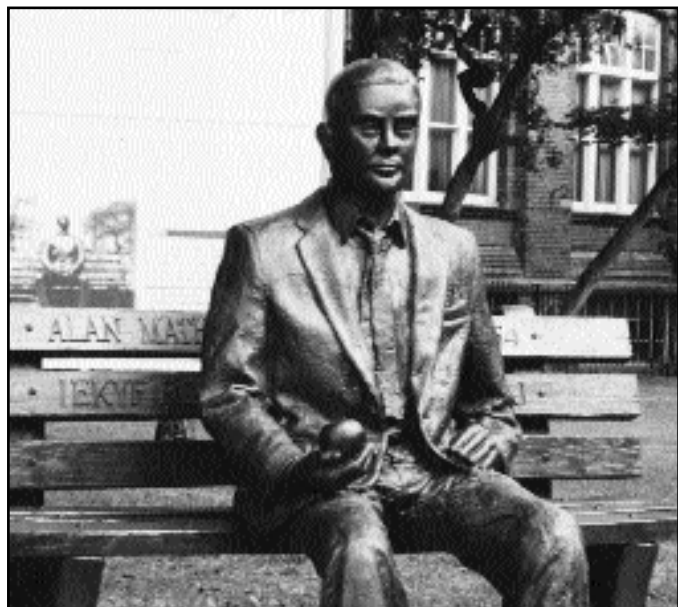


**William Theed's bronze statue of John Dalton,  
Chester Street, Manchester**

Public statues should be regarded as more than peripheral cultural artefacts, invisible figures in the townscape. In the case of the statues discussed here, they deepen our knowledge of the position and status of the scientific community in Manchester, and the roles that particular parts of the community played in promoting different histories of science. They contributed to the making of Manchester's public image as well as helping to define its civic spaces. We should also recognise that they throw new light on the lives of the scientists commemorated and their subsequent public reputations. It is interesting to note that Quaker Dalton, usually portrayed as a reserved and self-effacing individual, appears not to have objected to being immortalised in marble in his lifetime. Such monuments should not be dismissed as biographical footnotes.

It should also be recognised that these processes of public commemoration were historically specific. The twentieth century saw a shift away from such public commemoration, and not just in the form of full-length portrait statues. The discoveries of later university-based scientists - the Nobel Laureate, Ernest Rutherford, who laid the foundations of nuclear physics whilst at the University of Manchester, and now rests in Westminster Abbey as Lord Rutherford of Nelson, is the obvious example - were not regarded by Manchester in the same exalting light as Dalton and Joule.<sup>xliv</sup> The reaction against public statuary was a long historical process and already underway long before the First World War. Twentieth-century memorialisation of the famous favoured the practical memorial, preferring to restrict the more visible public tribute to the naming of a building or a lecture theatre, and, occasionally, the commissioning of a portrait bust. In part, this shift reflected the more ambiguous status of the scientist. It was also the outcome of a questioning of the place of the individual as hero in a mature industrial society that had experienced two major world wars. In this context it is noteworthy that the only public statue of a scientist to be raised in Manchester since Joule was in 2001.<sup>xlvi</sup> It commemorated the mathematician and code breaker, Alan Turing, who had spent the final years of his life working at the University of Manchester, contributing to the development of the world's first stored-program computer.<sup>xlvii</sup> He died in Wilmslow in 1954. Although some support for a statue did come from a small number of national bodies such as the British Society for the History of Mathematics, the realisation of the commission owed more to the increasing public presence of the gay community, both in Manchester and elsewhere, who saw Turing as a gay man who had been persecuted because of his sexuality and who had taken his own life by eating an apple containing cyanide. Local educational institutions and voluntary associations that might have been expected to have taken a prominent part in the scheme were peripheral players. Over £15,000 was raised towards the statue, almost all of it from individuals not directly connected to the world of computing, science and mathematics. Glyn Hughes's silicon-bronze statue was placed in Sackville Park, a small park which had been originally established at considerable municipal expense in the opening years of the twentieth century to show off the city's new School of Technology (later UMIST), but, which had become, by the end of the century, a public space closely identified with the city's gay village.<sup>xlviii</sup> The site was provided by Manchester City Council which saw the project as one which associated the city with the scientific ideas of one of the most

important mathematicians of the twentieth century, and one which furthered Manchester's public image as a modern and progressive community that was liberal, tolerant and unprejudiced.



Alan Turing, bronze statue by Glyn Hughes in Sackville Park, Manchester

And finally, a caveat. In this article we have focussed on the public statue which was, of course, only one of the forms in which science and scientists were visually represented in the nineteenth century. A fuller assessment of the visual representations of the scientist in Manchester would include discussion of paintings, drawings, photographs and commemorative busts. There is also the enormously rich subject of the representations of science in architectural sculpture, a study which might begin with Bridgeman's representation of Dalton (he is placed facing Newton) in the John Rylands Library. Indeed, to analyse these different types of images separately is to risk misunderstanding their historical connectedness and significances. Ford Madox Brown had almost completed one half of his singular pictorial history of Manchester when Chantrey's Dalton was transferred to the Town Hall. The original scheme for the twelve murals did not include any nineteenth-century subject. However, within a short period of time, Brown was to be at work on one: its theme was John Dalton discovering marsh gas.<sup>xlix</sup>

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## Notes

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- <sup>ii</sup> L. Jordanova, 'Remembrance of science past', *British Journal for the History of Science*, 33:4 (2000), pp. 387-406.
- <sup>iii</sup> P. Fara, *Newton. The Making of a Genius* (London, 2002).
- <sup>iv</sup> R.H. Kargon, *Science in Victorian Manchester. Enterprise and Expertise* (Manchester, 1977), pp. 13, 92, 161.
- <sup>v</sup> F. Greenaway, *John Dalton and the Atom* (London, 1966); D.S.L. Cardwell (ed.), *John Dalton and the Progress of Science* (Manchester, 1968); J. Morrell and A. Thackray, *Gentlemen of Science. Early Years of the British Association for the Advancement of Science* (Oxford, 1981), pp. 398-9; *Manchester Courier*, 8 Mar. 1834.
- <sup>vi</sup> *Manchester Courier*, 8 Mar. 1834.
- <sup>vii</sup> Subscription lists in Dalton Testimonial Committee Books and Cash Books, 1833-4. John Dalton Papers Nos 312-314 (John Rylands University of Manchester Library).
- <sup>viii</sup> Letters from Chantrey dated 4 Feb., 12 Feb. 1834, Dalton Testimonial Committee, John Dalton Papers No. 313 (John Rylands University of Manchester Library).
- <sup>ix</sup> Royal Manchester Institution Minutes, 19 Feb. 1834, 11 Aug. 1837, 11 July 1838 (City of Manchester Archives, M6/1/1/1, M6/1/49/2).
- <sup>x</sup> G. Jones, *Francis Chantrey, R.A. Recollections of his Life, Practice and Opinions* (London, 1849), p. 84; R.A. Smith, *Memoir of John Dalton* (London, 1856), p. 275.
- <sup>xi</sup> B. Love, *Manchester As It Is* (Manchester, 1839), p. 111; J. Perrin, *The Manchester Handbook* (Manchester, [1857]), p. xxx.
- <sup>xii</sup> Town Hall Committee Letter Book, 16 June 1884 (City of Manchester Archives, M9/75/2/2).
- <sup>xiii</sup> *Manchester Guardian*, 9 Oct. 1844.
- <sup>xiv</sup> *Manchester Courier*, 5 Oct. 1844; *Manchester Guardian*, 5 Oct. 1844.
- <sup>xv</sup> Proposed by Louis Schwabe, *Manchester Guardian*, 5 Oct. 1844, 19 Oct. 1844.
- <sup>xvi</sup> The likeness was based on Chantrey's Dalton. It eventually became unsafe and was removed in 1933: *Art Journal*, Feb. 1851, p. 61; *Manchester City News*, 1 Aug. 1925, 26 Sep. 1925; *Manchester Evening Chronicle*, 5 Aug. 1933.
- <sup>xvii</sup> *Manchester Courier*, 29 Jan. 1853; *Manchester Guardian*, 29 Jan. 1853.

- xviii Royal Manchester Institution Minutes, letter from Theed requesting permission to copy statue, 2 Nov. 1853 (City of Manchester Archives, M6/1/113); *Manchester Guardian*, 25 Mar. 1854.
- xix *Manchester Guardian*, 27 July 1855; *Manchester Courier*, 28 July 1855.
- xx *Manchester Courier*, 9 Jan. 1836, 16 Jan. 1836.
- xxi *The Times*, 12 Dec. 1855; *Manchester Guardian*, 15 Dec. 1855; *Art Journal*, Feb. 1856, p. 57.
- xxii *Manchester Courier*, 15 Dec. 1855.
- xxiii J.P. Muirhead, *The Life of James Watt* (London, 1858), pp. 534-5; R. McKenzie, *Public Sculpture of Glasgow* (Liverpool, 2002), pp. 122-4.
- xxiv W. Pole (ed.), *The Life of Sir William Fairbairn Bart* (1877, reprinted Newton Abbot, 1970), pp. 377-8.
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- xxvii *Manchester Guardian*, 26 Nov. 1889; *Manchester Courier*, 26 Nov. 1889.
- xxviii R. Dormont, *Alfred Gilbert: Sculptor and Goldsmith* (London, 1986).
- xxix *The Times*, 9 Dec. 1893; *Magazine of Art*, March 1894, p. 252.
- xxx Cardwell, *Joule*, p. 264.
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- xxxii *Manchester Guardian*, 7 Apr. 1905.
- xxxiii *Manchester Evening News*, 28 Oct. 1905; *Altrincham, Bowdon and Hale Guardian*, 4 Nov. 1905.
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- xl *Manchester Guardian*, 9 Dec. 1893.
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- xliv A. Fowler and T. Wyke, *Many Arts, Many Skills. The Origins of the Manchester Metropolitan University* (Manchester, 1993), pp. 70-4.
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- xlviii Personal correspondence with Richard Humphry and Glyn Hughes, Alan Turing Memorial Trust; A. Hodges, *Alan Turing: The Enigma of Intelligence* (London, 1983).
- xlix J. Treuherz, 'Ford Madox Brown and the Manchester murals', in Archer, *Art* (1985 edition), pp. 175, 207.