











Inside The Irish Giant: History, Medicine, and the Performing Arts



Capital Centre, Millburn House
University of Warwick

27th and 28th May, 2011

Convenor

Dr Claudia Stein (University of Warwick)

Inside the Irish Giant: History, Medicine, and the Performing Arts

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History of Medicine meets Theatre

The theatre production 'The Irish Giant' by Cartoon de Salvo relates the infamous eighteenth-century scandal involving the London surgeon John Hunter (1728 – 1793), hailed today as the father of modern surgery. In the



early 1780s Hunter was searching for another specimen for his widely known collection of abnormal bodies. He was desperate to lay his hands on London's most celebrated giant of the time, a young, but ailing Irish man, Charles Byrne (1761 – 1783). Byrne had exhibited his almost 8ft tall body all over London since the early 1780, surviving on the proceeds. However, a devout Catholic, Byrne had a very different idea about his afterlife than that intended for him by Hunter. He tried everything in his power to escape Hunter's knife and save his soul. But it was to no avail. In the end, the surgeon achieved his aim; through a colossal bribery, Byrne's body ended up in Hunter's anatomy theatre at Leicester Square. (While Hunter did not dare to exhibit Byrne's skeleton during his own lifetime, Byrne's remains are the centrepiece of the current exhibition at the Hunterian Museum at Royal College of Surgeons in London).

The details of the scandal remain a historical mystery, and it is precisely this unknown dimension of the Hunter-Byrne encounter that sparked Cartoon de Salvo's imagination. The result is an incredible journey, a theatrical tour de force, into what happened between the enlightened physician Hunter and the Irish country boy Byrne. The production, twice awarded Arts Awards from the Wellcome Trust, and developed in close collaboration with experts in medical history, gigantism, and medical ethics, plays with the historical event in



magical ways. But while, on the surface, the play is hilariously funny and enormously entertaining, it simultaneously raises, on a deeper level, controversial questions on the broader significance of medical science, past and present. Does the advancement of science justify the disregard of other beliefs systems? Do science and religious faith find themselves on opposing sides? What is the role of commerce in the pursuit of medicine? How does the medical marketplace in the eighteenth century differ from that of today? Is modern medicine more ethical and in the eighteenth century? The audience is invited to confront such questions and to take a position vis-à-vis the broader overarching concern of the play: the

role of the natural sciences in defining what it means to be human.

The 'Irish Giant' is not the Centre for the History of Medicine's (CHM) first encounter with theatre. In 2008 the Centre's postdoctoral researcher Dr Norwood Andrews collaborated with the Coventry-based Triangle Theatre Company on their production 'The Last Women'. This hugely successful play -- performed several nights at Coventry's Belgrade Theatre -- was inspired by the histories of Mary Ball, the last women hanged in Coventry in 1849, and Ruth Ellis, the last woman executed in Britain in 1955. The play brought together Andrews' historical expertise on the history of the death sentence with the largely improvised performances of seven actors. 'The last women' raised important questions about the value of human life and, most controversially, whether one has the right to end a human life. Moreover, it confronted the audience with the uncomfortable issue as to whether medicine should be complicit in such an act.

The Centre's collaboration with theatre was also expressed through the campus-wide 'Sexual Health Awareness Week', organised in 2009. Among its many activities was a performance workshop jointly organised with Warwick Capital Centre. This interdisciplinary project provided an opportunity for students from non-theatrical backgrounds to explore questions of disease and identity around HIV/AIDS on the basis of the famous Pulitzer Prize winning play, 'Angels in America' (1993), by the American playwright Tony Kushner.

The improvised character of such encounters is of great value for professional historians of medicine because it challenges and opens up the disciplinary boundaries that usually separate the practice of academic history from theatre, film or music productions. Collaborations between history and the performing arts offer historians new and exciting insights into alternative ways of dealing with the



source material available. Moreover, it entices them to find new and effective ways to prepare material so that it not only informs but also entertains. That said, to actually work with actors and theatre producers can be a serious challenge for historians precisely because it questions their traditional methodological toolkit and epistemological values. Historians are experts of the past; they are trained to collect historical evidence in the archive, to test its authenticity, and compose their narratives on the basis of that material. Their disciplinary methodologies caution them against the use of the first person in their narratives, and make them prefer the more impersonal and passive 'one' or 'we'. Historians are trained to keep an 'objective' distance from their chosen topic; to keep their own passions under control in order to allow the past 'speak' for itself. Of course, history writing is a creative act but its creativity follows the accepted rules of the academic discipline. Actors and producers, who — unlike the 'dead' archival material the historian usually deals with — are very much alive, and use their emotions and passions to explore the performance potential of the historical material, which can

sometimes lead to value effect over historical accuracy. It is this bending, or one should perhaps say, this testing of reality in the past (and present) by the performing arts, that most challenges the professional historian.

This challenge is worthwhile. Imagining scenes on the stage — Hunter teaching anatomy in his anatomical theatre at Leicester Square to a rowdy crowd of students, or, Charles Byrne publicly exhibiting himself at various places in London; Hunter and Byrne talking and quarrelling; Charles Byrne preparing his 'escape' — makes the historian scurry back to sources to find out what was likely, and what was plausible. Interacting with actors who play the eighteenth-century figures generates questions as to the kind of "evidence" that is historically interesting. Of course, the historian cannot cite these actors as proof in the footnotes of a book, but their comments offer further value or 'human insight' into the possible interpretations available from the archival sources. Their views enrich and widen the meaning of the sources; actor's make history relevant for today's world.



'The Irish Giant' -- not yet a finished production but a 'work in progress' -- presents further exploration into how to establish fruitful new working relationships between the history of medicine and the performing arts. How can such collaborations enrich research in the history of medicine? How can we create together new ways of teaching the history of medicine to students? And, finally, how can we maximize our strengths to reach and inspire a wider, non-academic public? The Centre's longstanding interest in

the performing arts coincides with recent important initiatives at Warwick University and it's widely known Arts Centre that aim to foster new collaborations between artists and academia. The independent producers, Ed Collier and Paul Warwick from China Plate who, since 2010 have been responsible for the development of new synergies, have also been central to the organisation of the 'Irish Giant'. The two performances on the 27/28 May, each of which was followed by a panel discussion, presented one of the first successful outcomes that emerged from such new initiatives between the arts and humanities at Warwick University.

The performances and panels, hosted by the University's Capital Centre, were viewed by a total of 120 people including the local community, visiting television production companies, academic researchers, and University staff. The first panel 'Religion, Science, and Commerce' (Professor Steve Fuller (Sociology, Warwick) Dr Claudia Stein (CHM, Warwick) Dr Carole Reeves (History of Medicine, UCL), Fr P.P. Jayalath Fernando (Chaplaincy, Warwick), Alex Murdoch (Cartoon de Salvo) explored the historical, ethical and religious dimension and relevance of the production. The second panel [Dr Claudia Stein (Warwick), Brendan Holland (a patient suffering from pituitary gigantism and a distant relative of Charles Byrne), Professor Márta Korbonits (endocrinologist,

Barts and the London School of Medicine), Ronan McCloskey (Producer/Director of BBC's Irish Giant), Brian Logan (Cartoon de Salvo)] focused on the medical side of the story, the condition of pituitary gigantism, from which Charles Byrne was suffering. The discussion centred on the most recent genetic findings, which identified a gene mutation as the cause of the illness. This discovery made it possible to link Charles Byrne to several contemporary families suffering from the same condition. The discussion also emphasised the key importance of patients suffering from pituitary gigantism to such new research findings. Their contribution continues to be of vital significance for research in this area and will help future sufferers. Brendan Holland's experience, which he kindly shared with the audience, helped to create a deeper understanding of the many challenges Charles Byrne's faced as a man of extraordinary height. Holland did not only draw attention to and explained Byrne's physical suffering but he also created understanding for the emotional and psychological pressures that accompanied his condition.

The Centre is pleased to have had the opportunity to take a leading role in this forward-looking initiative and is particularly grateful to the Wellcome Trust and Warwick Institute of Advanced Study for generous financial support of the project. Future projects in collaboration with the Warwick's Art Centre are currently being discussed.

THE STORY OF THE IRISH GIANT...

This public outreach event centred on an historical encounter in Georgian London between the Irish giant Charles Byrne and the famous anatomist and surgeon John Hunter (1728-1793). While the outcome of the encounter is known – Byrne's skeleton ends up in Hunter's possession – the exact details of how it got there remain in the dark.

Charles Byrne (1761 – 1783), also known as Charles O'Brien or the "Irish Giant", was a human curiosity in London in the 1780s. His exact height is unknown: most accounts refer to him as from 8 ft 2 in (2.48 m) to 8 ft 4 in (2.54 m) tall, but skeletal evidence suggests that he was just over 7 ft 7 in (2.31 m). His family lived in a remote part of



north-east Tyrone called Drummullan, not far from the shores of Lough Neagh. Local tales tell that Byrne was conceived on top of a haystack to explain the cause of his unusual height. Little is known of Byrne's family other than that his parents were ordinary people, and that they were not unusually tall.

At 21, Byrne left his home in Littlebridge, Ireland and traveled to London seeking his fortune. The city was a magnet for every manner of human oddity at the time. Londoners were eager to pay to see 'freaks' and 'wonders' -- people with deformed and extra limbs, great or diminutive height, or with visually shocking medical conditions. He found work at Cox's Museum and moved into an elegant adjacent apartment, stocked with custom-built furniture. Charles soon became the toast of the town. A 6 May 1782 newspaper report noted: 'However striking a curiosity may be, there is generally some difficulty in engaging the attention of the public; but even this was not the case with the modern living Colossus, or wonderful Irish Giant.'

Among those whose attention was drawn to London's latest wonder was the anatomist John Hunter. Driven – even possessed -- by a deep curiosity about unusual bodies and preoccupied by scientific studies of human malformation Hunter became obsessed with procuring Byrne's body for his anatomical collection, whatever the cost. Under permanent surveillance from Hunter's spies, Byrne, a stout Catholic, began to fear for his soul and afterlife. Indeed Byrne was so afraid that Hunter would dissect his corpse that on his deathbed requested to be buried at sea.

Fame and wealth soon overtook Byrne, and he gained a reputation for excessive drinking. According to newspaper reports he was drunk when his pocket was picked of his 700-pound life savings. Inconsolable, he drowned his sorrows and died in his apartment on Cockspurstreet, Charing Cross, in June 1783, at the age of only twenty-two.



Against his explicit wishes, Byrne's corpse was purchased by John Hunter for five hundred pounds (2011: £50,000). To achieve this end, Hunter bribed a member of the funeral party and filled the coffin with rocks at an overnight stop as Byrne's body was taken from London to the sea where he had wished to be buried. For reasons unknown, Hunter who had put so much effort into procuring Byrne's body never displayed the skeleton during his lifetime. The skeleton is today on display at the Hunterian Museum at the Royal College of Surgeon's in London.

While the skeleton's public display continues to provoke controversy, there is no doubt that Byrne's body continues to be of extraordinarily importance for medical research. Scientists today recognise Byrne's condition as gigantism, caused by a tumour in the pituitary, the endocrine gland that secretes many essential hormones, including those for growth. Depending on the patient's age at the onset of the tumour, either gigantism or acromegaly (typically characterised by excessive growth of the jaw, hands and feet) develops. Byrne's bones were first studied in 1909 by the renowned American surgeon Harvey Cushing (1869-1939) who removed the top of the skull and, discovering a grossly enlarged sella turgica where the pituitary body would have been, diagnosed that Byrne's had had indeed suffered from a pituitary tumor. In 2011, a team of British and German researchers determined the cause of Byrne's gigantism. They extracted DNA from two of Byrne's teeth and discovered that he had a rare mutation in his *AIP* gene, which is involved in the development of pituitary tumors. The researchers also found that four contemporary families living in Northern Ireland that had a history of related pituitary disorders also carried this mutation. From these finding it was inferred that Byrne and these families had a common ancestor about 57 to 66 generations ago (1425 to 1650 years ago).

John Hunter (1728 – 1763) was a Scottish surgeon and one of the most distinguished eighteenth-century scientists. He was an early advocate of scientific observation and was unique in seeking to provide an experimental basis to surgical practice. Born at Long Calderwood, now part of East Kilbride, Lanarkshire, Scotland, Hunter came to London in 1748 at the age of 20. He worked as an assistant at the anatomy school of

his elder brother William who was already an established physician and obstetrician. Under William's direction, John learnt human anatomy and showed great aptitude in the dissection and preparation of specimens. He continued his studies under the then eminent surgeons William Cheselden (1688-1752) and Percivall Pott (1714-88) at Chelsea Hospital and St. Bartholomew's Hospital.

In 1760 Hunter left London to join the army. During his three years in Portugal and France, he developed not only new ideas on the treatment of common ailments, such as gunshot wounds and venereal disease, but he also spent much of his spare time collecting animal specimens. On his return to England in 1763, Hunter began to build up his private practice and anatomy museum. His scientific endeavour did not go unnoticed and, in 1767, he was elected a Fellow of the Royal Society, followed by an appointment as Surgeon to St George's Hospital.

In 1783 he moved – together with his wife Anne Home whom he had married in 1771 - to a large house in Leicester Square. The house soon became a leading centre for medical teaching and research. It was equipped with an own anatomy theatre and a large anatomical collection of nearly 14,000 specimens. Mainly thanks to the social skills of his wife – Hunter himself was known for his fervent temper – their home also became a 'must' for London's fashionable eighteenth-century society. While Hunter kept Byrne's skeleton most certainly with his other specimens, he never exhibited it publicly during his own lifetime. The reason remains a mystery....

Further Readings:

Chushing, Harvey, The Pituitary Body and Its Disorders: Clinical States Produced by Disorders of the Hypophysis Cerebri (1912)

Chaplin, Simon David John, John Hunter and the 'Museum Oeconomy', 1750-1800 (2009)

H. S. Chahal, K. Stals, M. Unterlander, D. J. Balding, M. G. Thomas, A. V. Kumar, G. M. Besser, A. B. Atkinson, P. J. Morrison, T. A. Howlett, M. J. Levy, S. M. Orme, S. A. Akker, R. L. Abel, A. B. Grossman, J. Burger, S. Ellard, and M. Korbonits, 'AIP mutation in pituitary adenomas in the 18th century and today', *New England Journal of Medicine* 364 (1) (2011):43-50.

Moore, Wendy, The Knife Man (2005)

Mantel, Hilary, The Giant O'Brien (1998)

Kobler, John, The Reluctant Surgeon: A Biography of John Hunter (1960)

Gray, Ernest A., Portrait of a Surgeon: A Biography of John Hunter (1952)

THE PRODUCTION...

The Irish Giant by

Cast and Creative Team

Performed by: Alex Murdoch, Brian Logan, Brian Thunder

Directed by: Alex Murdoch

Designed by / Animation by: Rebecca Hurst

Composer: Daniel Marcus Clarke

Lyrics: Brian Logan with additional lyrics by Daniel Marcus Clark

Producer: Ed Collier



Lighting designer: Ben Pacey

Illusions: Paul Murray

Production Manager: Jeremy Walker

ASM & AV Adviser: Dori Deng

Wellcome Trust Scientific Advisers: Roger Cooter, Muireann Quigley and John Wass

A word from Alex Murdoch the Director

We've been thinking about this piece for about four years, so it's great timing that the story of the Irish Giant has suddenly popped up in worldwide press. One thing we've been looking at is how Charles Byrne's wishes to be buried intact might have stood in the way of progress. Meanwhile our Wellcome Trust science partner John Wass - expert on acromegaly - tells us his colleague Márta Korbonits (who joined our Warwick panel discussion on Saturday) has been sampling Byrne's teeth to make huge leaps forward in understanding genetic links to his condition... and in January a letter to the Guardian demanded Byrne's bones are returned some 250 years late to Ireland for a decent burial. It's extraordinary how a 250 year old story is still contentious and current! This is an early stage scratch, and we've taken a little artistic license with the set up but otherwise it's all a true story...

Cartoon de Salvo's brand new show *The Irish Giant* is a work-in-progress production. Following a period of research with their science advisers and short residencies at New Greenham Arts and BAC, they spent time in London and one week at Warwick reworking the piece to the Centre for the History of Medicine's length and venue specifications. As Cartoon de Salvo make devised theatre from improvisation, rather than a script, the



piece performed was the result of around 3 weeks work on the show, starting from scratch. Working closely with CHM, they built a set, composed and learned the music and tailored the story to open and inspire wider discussion.

THE PANEL DISCUSSIONS...

Our two panel discussions aimed to engage attendees with themes highlighted by the Irish Giant production, and to raise interest in the history of medicine. As a wealth of relevant subjects emerge from the piece, the two panels focused on what we felt to be the 'major' discursive



themes drawing the eighteenth-century experiences of the Irish Giant into conjunction with life today: we therefore focused on the debate between religion and science, and questions about how historical discoveries are still enabling scientific breakthrough today. Please see below for details on our expert panelists.

Friday 27 May

Religion, Science and Commerce with panelists:

Fr.P.P Jayalath Fernando (Warwick)

Reverend Dr. P. Jayalath Fernando is the Catholic chaplain to the University of Warwick. His priestly training began at the age of twelve, and culminated in a BA in Philosophy and Theology from the Pontifical Urbanian University in Rome. He read for his PhD on Computer



Friday Panel – Religion, Science and Commerce

Vision and Artificial Intelligent Systems at the Computer Laboratory University of Cambridge. Jayalath also obtained a BSc in Mathematics and Computing from University College, London, and an MSc in Industrial Mathematics and Dip. Ed. in Sri Lanka.

Professor Steve Fuller (Warwick)

Steve Fuller is Professor of Sociology at the University of Warwick. Originally trained in the history and philosophy of science (Ph.D., 1985, University of Pittsburgh), Fuller is most closely associated with research in social epistemology. Fuller has organized two global cyber conferences for the

UK's Economic and Social Research Council: one on public understanding of science (1998), and another on peer review in the social sciences (1999). He has spoken in 30 countries, often keynoting professional academic conferences, and has been a Fellow of the Royal Society of Arts since 1995. He was awarded a D.Litt. by Warwick in 2007 for significant contributions to scholarship. His writings have been translated into twenty languages, and his book *Kuhn vs Popper* was in 2005 named book of the month by the US magazine, *Popular Science*. Similarly, *The Intellectual* was named a book of the year by the UK magazine *New Statesman* for 2005, and *Dissent over Descent* was named book of the week by *Times Higher Education* in July 2008.

Alex Murdoch (Cartoon de Salvo) Alex Murdoch is the Artistic Director and a co-founder of Cartoon de Salvo and has directed all (and performed in many) of their shows which include the outdoor theatre event *The Sunflower Plot* (set in an allotment); 2005's *BAC* Christmas show *The Ratcatcher of Hamel*, and *Meat and Two Veg*. After taking her degree at the Central School and London University, Alex trained at Ecole Philippe Gaulier. She was invited to the Royal National Theatre Studio Directors Course (1999) and has taken workshops with Monika Pagneaux, Marcello Magni and Keith Johnstone. Credits include performing and improvising; *Ghosts Nets II*, *Roger Salmon*, *The Wooden Frock* (all for Kneehigh Theatre), *Crackers* and *Squib* (The World Famous), and guest improv with the Comedy Store Players, directing: 126 Flutes with jazz flautist Keith Waithe for BAC Opera, Guy Dartnell's *Unsung* (co-directed with Tom Morris), Ionesco's *The New Tenant* (Young Vic) and a reading of Karpati's *The Fourth Gate* (National Theatre). She is an Associate Artist of BAC and plays the washboard for Americana/country band *The Du-rell Family*.

Dr Carole Reeves (University College London)

Carole Reeves has a PhD in history of medicine (University of London) and additional qualifications in education, photography, film and television production. She has worked as a medical illustrator, and was, for over twenty years, a freelance writer/director, communicating medicine and science both to specialist and public audiences. She has also been involved as an adviser in the education and training of media students, and is a Fellow of the Institute of Medical Illustrators and of the British Institute of Professional Photographers. Her public engagement projects for the Centre include *Secrets of the Body*, a film which has toured public venues in the UK and is used in schools and colleges throughout North America; and a history of medicine for HistoryWorld, which won the *New Statesman* New Media Award (2003) for the UK's best educational web site. Her 'The Children of Craig-y-nos' is a community project recording the memories of children who were patients in a tuberculosis sanatorium. She has also worked with the Wellcome Trust in

the preparation of its own history, with local historians in the search for community medical history, with family historians to help them trace their ancestors through medical records, and with teachers on the GCSE history module, Medicine through Time.



Alex Murdoch Prem Fernando and Steve Fuller

Dr Claudia Stein (Warwick)

Dr Claudia Stein's (Director of the Warwick Centre for the History of Medicine and convenor of 'Inside the Irish Giant') main research interests continue to be the world of early modern medicine and science, with a strong interest in visual culture and medicine. Her current research project 'The Birth of Biopower in Eighteenth-Century Germany' takes her research from the area of the socio-cultural construction of early modern diseases (e.g. the French Pox) to the world of eighteenth-century medicine and court culture in Bavaria.

Saturday 28 May

Gigantism, Genetics and History with panelists:



Brendan Holland (Pituitary Patient)

58-year-old Irish businessman Brendan Holland was involved with TV documentary-maker Ronan McCloskey on the BBC project, 'The Irish Giant'. Holland, like other members of his family, was affected by a pituitary tumor as a teenager. It was removed but left its mark: Holland is 2.06m [6ft 9in] tall (still a foot shorter than Byrne, whose real height was 2.34m [7ft 8in]). Holland comes from Tyrone and is fascinated by the number of actual giants in the area. Tested by Professor Márta Korbonits (also filmed for the BBC *Irish Giant* production), Holland was found to have the AIP mutation, the same mutation as Charles Byrne.



Professor Márta Korbonits (Endocrinologist, Barts and the London School of Medicine)

Professor Márta Korbonits graduated in medicine in Budapest and worked in the Institute of Pathophysiology for 2 years before joining the Postgraduate Medical School for clinical training. She joined the Department of Endocrinology at St. Bartholomew's Hospital in 1991 and studied the hypothalamic regulation of growth hormone release with Prof. Ashley Grossman. She subsequently started clinical and laboratory research with growth hormone

secretagogues and later with ghrelin, which formed the basis of her MD and then PhD thesis together with studies related to pituitary tumorigenesis. Professor Korbonits, a professor of endocrinology and metabolism at Barts and the London Medical School, has a special interest in an inherited form of pituitary tumor called familial isolated pituitary adenoma (FIPA), in particular a type caused by mutations in the AIP gene.

Brian Logan (Cartoon de Salvo)

Brian Logan is a Co-Company Director and co-founder of Cartoon de Salvo and has devised and performed in all of their stage shows: Here Be Dragons, Bernie & Clive, Meat & Two Veg, Ladies & Gentlemen Where Am I?, The Chaingang Gang, The Sunflower Plot, The Ratcatcher of Hamelin, Hard Hearted Hannah and Pub Rock. As a playwright, Brian's work includes David Hume's Kilt (2006; developed at the National Theatre of Scotland and the Traverse Theatre, Edinburgh) and The Key to the Universe (2007; runner-up in the Robert McLellan Award for plays in the Scots language). Brian directed Better Humans at BAC, London, in 2009. He is also a freelance arts journalist, the comedy critic of the Guardian newspaper, and an ex-Assistant Theatre Editor of Time Out London. He also writes for the Times, the Independent on Sunday, the New Statesman and Variety.

Ronan McCloskey (Producer/Director of BBC's Irish Giant)

Television Producer / Director and Camera Operator, Ronan McCloskey produced the BBC's Irish Giant, an incredible film about two Irish giants living parallel lives 250 years apart. Charles Byrne was born in Tyrone in 1761 - Brendan Holland was born in Tyrone in 1952. They both suffered from pituitary gigantism. The film follows Professor Márta Korbonits at Barts Hospital as she studies a number of Irish families suffering from pituitary gigantism. McCloskey's other documentaries include; 'The Fit Finlays' about the history of professional wrestling in Ireland and 'Get Well Northern Ireland' a one hour documentary following a pilot project called the Get Well Scheme which aimed to reduce prescription medicine addiction in Northern Ireland. The film also features a cancer patient who turned down chemotherapy in favour of alternative medicines.

Dr Claudia Stein (Warwick)

Please see Friday 27 May panel information.



Brendan Holland and Claudia Stein





With academic staff, early careers scholars (postdoctoral, PhD and MA researchers), honorary fellows and associate members, the **Centre for the History of Medicine** [CHM], (situated in the Department of History), conducts diverse research including a wide range of academic conferences, seminars and workshops. Our public outreach events engage with the local community and the public at large over contemporary medical and scientific concerns in creative and innovative ways.

The Centre was pleased to be awarded a second **Wellcome Trust** Strategic Award (£800k for 2008-13) in 2008 to undertake a programme of research on the theme 'Situating Medicine: New Directions in the History of Medicine'. We aim to investigate how the practice of medicine is related to wider intellectual, cultural, social, political, and economic trends at a particular moment in history and at the present.

For more information on the Centre please feel free to visit our website: www.go.warwick.ac.uk/chm. For more on the Irish Giant, see: www.go.warwick.ac.uk/chm. For more on the Irish Giant, see:

Irish Giant Collaborators...

Supported by wellcometrust

The Wellcome Trust's vision is to achieve extraordinary improvements in human and animal health. In pursuit of this, the Wellcome support the brightest minds in biomedical research and the medical humanities. The Wellcome Trust not only funds the Centre for the History of Medicine at Warwick but also significantly contributed to the *Irish Giant* and many other events within the history of medicine. We are extremely grateful for their continued support and generosity.

www.wellcome.ac.uk



China Plate is a partnership between Ed Collier and Paul Warwick for delivering innovative artistic development opportunities, acting as a conduit for collaboration between the academy and the creative arts and encouraging leaps into unknown creative territory. China Plate are the Associate Producers at Warwick Arts Centre. Working closely with Director Alan Rivett and his team, China Plate programme and deliver vibrant and engaging, contemporary theatre for the Studio and are exploring new ways for the centre to engage with theatre artists in developing new work.

http://www.chinaplatetheatre.com



The Warwick Institute of Advanced Study is designed to promote collaborative research projects of international calibre and profile. It operates across the full range of University departments, schools and research centres. The IAS supports a major Visiting Fellowship programme, innovative research initiatives and a range of early career activities and schemes and contributed funding support for the Irish Giant public engagement event.

www.go.warwick.ac.uk/ias

warwick arts centre

Warwick Arts Centre (WAC), driven by the attitude and imagination of today's artists, believes the arts are a crucial ingredient for the well-being of contemporary society in the West Midlands. One of the most unique and significant presenters and co- producers of contemporary performing and visual arts in the UK, beyond the capital cities, and the largest and most outstanding university-based presenter of contemporary live and visual arts. WAC is arguably at the vanguard of contemporary theatre, dance, music, spoken word, film and visual arts, with a programme which is both diverse and international. An incubator of new ideas, it is dedicated to creating artistic partnerships and the development of new work, maintaining a passion for internationally-acclaimed artists whose works are characterised by an unrelenting curiosity and dazzling originality.

http://www.warwickartscentre.co.uk

carfoon de salvo

Creators of the *Irish Giant*. Founded in 1997, Cartoon de Salvo is one of the country's most respected theatre companies. Their cocktail of script-defying improvisation, live music and exceptional storytelling has won critical acclaim and a devoted following. On their quest to mess with the live theatre experience, the Salvos make theatre that wears its heart on its sleeve, that likes an adventure, and that never forgets that the audience is the number one reason for putting on the show.

http://www.cartoondesalvo.com

Our thanks to:

The Capital Centre (University of Warwick), for use of the Capital Studio and spaces to host our Irish Giant Event.

Production thanks to: BAC, New Greenham Arts, The Wellcome Trust, South St Reading, Sandy Grierson, Neil Haigh, Caroline Horton, Phil Moore, Ric Watts, Caroline Routh, Charlie Morrison, Helen Blythe and Ed Borlase.

The Centre for the History of Medicine volunteers; Thomas Bray, Dr Claire Jones, Harriet Palfreyman, Claire Sewell and Dr Stephen Soanes who assisted throughout.

Luke Robert Mason (a Warwick Theatre and Performance Studies researcher) who videoed the production and panel discussions and will be producing a piece for the Centre's Irish Giant website (to be uploaded in the near future): www.go.warwick.ac.uk/chmirish_giant





Feedback Form

Inside the Irish Giant: History, Science and Art

University of Warwick, Millburn House 27-28 May 2011

Feedback Responses: 24

Friday 27th May=**6** / Saturday 28th May =**18**

Attendance at open forum: =2 (Only applicable to Friday)

Saturday - the open forum didn't appear although we had an informal discussion in the foyer

Attendance at panel discussion:

Religion, Science and Commerce - = 6

Gigantism, Genetics and History - = 18

Question Responses:

What is your previous experience of the field of the History of Medicine?

- I am a professional in the field
- PhD Student
- PhD in the History of Medicine
- I am currently undertaking a PhD in HoM
- Married to it
- Reasonably extensive have been involved in Theatre in Education, work on science history
- Nursing Experience
- Worked with the centre on the Three Doctors at Cov and Warks Hospital
- Interest in context of medical degree and continuing work as general practitioner
- Did a module 'history of medicine' as part of a BA at University of Warwick 20 years ago, this of course was prior to the establishment of the Centre for the history of medicine

- None apart from a couple of museum visits
- I had an operation on my teeth one and that's about it
- Enjoy reading history
- Very little, a bit at school in History lessons (Roman, Greek, Egyptian and Medieval European) that was a long time ago
- Only very indirect
- None
- None
- This is my first time
- General interest
- None
- No education in it but it is an interest of mine so I know a bit from museums and TV documentaries How do you feel this event enhanced your knowledge of the History of Medicine?
- By raising important issues. By asking questions that should be considered.
- Yes of the specific C18 context that Hunter and Byrne inhabited although obviously this is to be taken with a pinch of salt!
- Learnt more about the conflict between science and religion
- A very interesting introduction to a range of issues ethical/moral/ human and societal associated with medicine in the C18 and C21
- A fantastic forum where previous ideas about the medicine/religion divide were greatly stimulated
- The specific of John Byrne (John Hunter or Charles Byrne?)
- Thought provoking taking interest in history and the 'dry facts' and progressing into ideas/ethics relevance to what is know now and how social/public opinion perceive historical ideas
- I had never heard of Charles Byrne before tonight. It also brought out the immorality of early medical development
- Since I am from a completely different approach to knowledge and science this event has been of particular usefulness and illustrative
- It was a starter for 10 but having been to the Old Operating Theatre I was fascinated
- I have no knowledge so it gave me some
- I know a bit more about John Hunter's work, as I'd never heard of him and I'd never heard of the Irish Giant before
- Yes, but only on this specific subject. I now would like to read more about it
- Highlighted the difference of opinion between anatomists in the past, their beliefs in medicine and how the human body worked. I was surprised people still believed in the tumours theory in the C18, I thought that was the idea of the medieval times
- Absolutely fascinating event I still don't know much about all the stuff the Centre here does but it has been a real insight into something I'll read more on

- I enjoyed the opportunity to see a public engage with HoM
- I found it stimulating to see the motives of Hunter, the anatomist, explored as drama
- Significantly
- A little
- N/A
- It didn't

What were your views on the open forum / panel discussion? (How these fit with the production?)

- I felt the panel was a good idea, but the members needed more guidance to help engage with the audience
- Like a live radio 4 'In Our Time' and a perfect illustration of why it's interesting for scientists and artists to work together: not (as suggested in the open forum) that artists are too lazy to read a load of books but because the best way to learn is to meet, talk, find points of connection, it comes alive
- Is the open forum about the production? Or about the science/history? Two separate exhibitions would have enabled more to learn more about each
- Riveting every opinion thoughtful
- Very interesting accessible more so than I thought it would be
- I found that the discussion was interesting but maybe too long regarding religious issues while this is not the only one. For me social and cultural issues are more relevant
- I enjoyed the discussion although one member was rude and disruptive
- Interesting to hear a range of views. Brought issues raised in play to the forefront
- Valuable debate, interesting detail about endocrinological aspects, insight into development of theatrical productions
- Excellent, informative and stimulating
- The panel discussion was a worthwhile addition. It was simply a shame that there was not more time for discussion
- Panel was very interesting it was fascinating to hear the personal insight of Brendan as someone with the condition
- Very interesting!
- It was enjoyable, if short, and may have benefitted a little more from increased audience participation
- The panel discussion was almost as interesting as the play itself, and should remain a part of the production
- The panel was very comprehensive for a discussion of a drama concerning gigantism. It was interesting to meet Mr Brendan Holland who is a pituitary patient and a medical historian; at the risk of being impertinent if you invite him again may I suggest you provide him with a special chair. Gigantism

patients are not strong but being heavy tend to develop pressure sores sitting in normal chairs, perhaps the engineering students could make a suitable chair

- Excellent
- Not got there yet
- The open forum was a bit of a non event, was expecting something more structured. I think there needs to be more encouraged debate
- I would question whether it is necessary to spend money on printing bags and pens and doing a raffle. Surely the money could be put to use in more worthwhile ways (e.g. giving the theatre company a little more)

Would you be interested in future events hosted by the Centre for the History of Medicine?

If yes, please feel free to list any topics you may be interested (and contact email if acceptable):

- Yes, History of Psychiatry
- Yes no preferred topic
- Yes
- I'm interested in anything to do with the history of medicine
- · Absolutely, fabulous event, well organised and really engaging
- Certainly
- Yes
- Yes
- Do I have a choice?
- Artificial Intelligence, artificial insemination, ethical limitations of semen bank
- Definitely
- Yes Transplants
- Synthetic biology, Antibiotics, Blood transfusions, GM foods, Organ transplants
- Willing to pretty much try anything
- Yes
- Probably not, I'm here from the theatre side rather than the science side

Would you 'free' the Irish Giant?

- Yes
- Yes
- Nope

- Yes, after taking photos of the skeleton and noting down details of it. His wish should be granted- if they buried Osama? in the sea, why not the Irish Giant
- Yes!Yes!Yes!
- Yes
- Yes
- Yes
- Absolutely
- Difficult to answer
- I don't know if this will be repair the damage done but maybe it can help
- Yes
- Allow him to live a 'normal' life rather than become a sideshow but medical research a valuable tool
- He's finding his freedom through the contributions he is still making to scientific knowledge and development
- I would liberate him from the museum it would be perfectly possible to take DNA samples from the body before allowing Byrne's last wishes to be fulfilled
- No the skeleton has already proven useful to medical science and I am personally not concerned with the moral issues given so much time has passed
- Yes memories and wishes are more important that what we currently define as 'progress'
- Yes personal choice should always be respected



What is the most memorable element of the performance for you?

- The development of the relationship between the Giant and the man employed to stalk him
- The cartoon/animations set to music very enjoyable way to move the story on and move between scenes
- Difficult to say it was very unusual and memorable! The gore, the mix of human and anachronisms in a very emotional story
- The actualisation of the 'self examination' metaphor of Hunter as more organs appear through the show and it is made explicit at the end, there were several very powerful moments and visual images throughout the show
- I particularly liked the songs and the animations, and equally the use of space. Fantastic!
- The relationship between Byrne and Hunter
- Interaction of the 3 characters/ability to convey so many emotions whilst portraying complex issues of historical interest but C21st relevance
- Hunter's hesitation to commence the dissection

- Inventive use of set- use of cartoons to tell part of story
- The music and use of cartoons
- The methephoric journey of the soul showed in the cartoon, the cycle of like showed by the cartoon, the songs are beautiful and illustrative
- The element of closeness when Charles gets to meet his pursuer
- The Giant the dilemmas the music
- I liked the animation bits
- The sadness of the Giants short life
- Brian's tinkly piano and Alex's playing of Hunter's assistant
- Great songs, really enjoyed the moments of magic (mirror table of invisible thread), good strong characterisations which helped in telling the story
- The use of multimedia the filming, puppetry, (? For the drinking song?) and the use of recorded sound, the enthusiasm of the actors was also good to see, very inspiring, you're like non pretentious kneehigh?

 Theatre
- The developing relationships between Byrne and 'bodysnatcher', the live music, the end image
- I enjoyed the rowdy medical students (very accurate historically)
- I liked the whole show, thought all the actors performed well, liked the music and the amputation business at the start of the piece was done well
- The knife trick, the use of roller blinds excellent

Is there anything you would like to see changed for the finished show?

- I think pacing was a bit variable, the first musical interlude was a bit long for me, it was easier to interact with the music later in the production
- The framing of the musicians is confusing or rather having to jump back and forth from students to other, maybe simplify the number of layers/framing devices
- More lines for the Irish Giant, and more lines from Hunter that explains why he thinks what he does why is he agnostic and his brother religious for example? They were brought up by the same parents so why did they change their opinions as they became adults
- Although I loved the style of the animations, is there anyway they can be more sophisticated? It also felt a little too long
- The whole set up was very complicated big set, lots of levels and ladders, tons of props, all the music and animation and filming but the best part was the performances and everything else got in the way a bit
- Shorter maybe
- I wasn't a huge fan on the 'kookie' thing at the beginning
- I liked the unscripted nature of the show. As they progressed and got into their stride it became much more powerful. I found the beginning entertaining but confusing

- More about the Irish Giant at the moment the show seems to be trying to do too much we're interested in how Charles & John are connected, that explosive moment. I think you need to explore the devices of the students and going inside the body more but I wouldn't be disappointed if they didn't make it into the finished show, musically talented cast and nice songs, bit disjointed but to be expected at this early stage, interested in seeing the finished piece
- I think the jokes at the beginning are ok but not absolutely necessary, blood and harsh very good idea in the second performance, maybe you can give the audience a short written information about the performance f you want to explore general public for instance
- Perhaps a bit about how his skeleton is still on display, this would have made the ethical issues more obvious and relevant (still going on)
- The bond between John and Byrne would need a bit more development
- Just continuing development, format great
- Anachronistic, post modern gags didn't work for me
- Some parts were perhaps a little laboured, the possible dissection of Byrne and the decrease in price of viewing Byrne
- Start with the letter reading (it is a beautiful ending) and would give a symmetry to the show structurally and immediately engage with the main story, reduce some of the anachronisms which are only for comic effect, those which support the narrative are effective (i.e. camera)
- I kept getting distracted by flashes of light which seemed to be coming from where the technical staff was controlled (sorry for this comment) that was just someone's phone who was sitting near there, the bit where the students criticised Hunter for saying that souls of dissected bodies probably still go to heaven seemed overly emphasised, I think the issue was there enough already
- If made longer perhaps an interval might be welcome, the room got very hot
- The comedy-esque start of the show was incongruous with the rest and should be toned down or removed
- I think the body snatching character would have probably have travelled by horse and would have had a leather saddle bag rather than a modern rucksack. Also may I suggest a larger shiny knife is used in the scene where Hunter is contemplating dissection, the actor could hold the knife aloft in various poses and the fist be picked out by a small spot light

Is there anything you would like to say about the content or issues raised in the show?

- That they were very well developed/explored and sensitively portrayed
- There was talk in the panel section about not having am actor represent the 'giant' I think that having Charles Byrne be represented this way is essential, if the moral tension running through the play is to remain, humanitising Byrne is a must
- I really liked the depth of all 3 principal characterisations, it gave an insight into the range of moral/professional/obsession themes e.g. Hunter's brother and ambition, whomever saying the lord's prayer, more information about the actual physical effects of pituitary gigantism on Charles Byrne

- I think the show should be commended for its emphasis on drawing together of art/life, for making a statement and for making the audience reflect on the modern day relationship/dominance of science/religion and morals
- Lots but not enough space, will email
- Fascinating history but concept of examining in context of Hunter's work interesting
- It is a 'whose body is it anyway' theme and extremely valid today, particularly with organ transplanting becoming more widely used
- Who should keep your body?, how our bodies should be kept? The relationship between body and soul, contradictory relationship between science and religious/traditional beliefs, the boundaries between life and death
- Made me wonder about the closeness in storyline to the Elephant Man, very interesting to have a modern perspective on the show during the forum
- Very thought provoking, would like to know more
- Excellent acting and use of scenery and space
- Maybe the show could have more to say on the issues it raises, rather than needing to be supported through exhibitions and discussions and unnecessary goodie bags
- Really enjoyed the story, it all made sense without any prior knowledge of history, love the very last moment
- It did its job in bringing the story and the issues alive, enough to leave me with questions rather than answers, i.e. balance was right
- I'd love to see more room for other than body snatching, its good, but what about organ theft, tissue stolen from old men, Henrietta Lacks? Etc
- Elements of the public are still squeamish about dissection and retention of body parts, perhaps Hunter's students could have a dialogue concerning possible organ transplants in the future. Example why if our teacher finds the soul and transplants are possible in the future, think of the possibilities, it will not be necessary to hang an evil person who steals a sheep, one could keep him alive, remove his soul and replace it with that of a good Christian man who had been killed by the kick of a horse. Also at the time antiseptics were virtually unknown, a surgeon was admired for the old blood stains on his coat, example of dialogue why Mr Hunter is a great surgeon his coat is stained with the blood of countless operations
- It would have been good to have read the book (the Knifeman which is excellent) before seeing the show.

IRISH GIANT

To be seen this, and every day this week, in his large elegant room, at the Cane-shop, next door to late Cox's Museum, Spring Gardens, Mr. Byrne, the surprising Irish Giant, who is allowed to be the tallest man in the world, his height is eight feet two inches, and in full proportion accordingly, only 21 years of age. His stay will not be long in London, as he proposes shortly to visit the Continent.



The nobility and gentry are requested to take notice, there was a man shewed himself for some time past at the top of the Haymarket, and Piccadilly, who advertised, and endeavoured to impose himself on the public for the Irish Giant; Mr. Byrne begs leave to assure them, it was an imposition, as he is the only Irish Giant, and never was in this metropolis before Thursday the 11th inst.

Hours of admittance every day, Sundays excepted, from 11 till 3, and from 5 till 8, at half-a-crown each person.



Source: 'THE IRISH GIANT', *The Odd Fellow,* Saturday, January 26, 1839, Issue 4 (London, England).

THE GUARDIAN

irish ciant should be burned, not caped at

According to recent DNA findings, Charles Byrne, the Irish giant, may have contributed to our understanding of gigantism, and may help in future treatment of patients carrying the same "variant in the AIP gene" before they grow into giants (Land of giants, G2, II January).

Other than provide a link to current sufferers of an inherited form of pituitary tumour, I cannot see how this advances our understanding of gigantism. John Hunter, the surgeon who appropriated the body of Charles Byrne by nefarious means, did in actual fact carry out a postmortem on Byrne, and was disappointed to find that there was no specific cause for his gigantism except a malfunctioning pituitary gland.

Now, almost 230 years after his death, Charles Byrne is still a "freak" displayed in a glass case at the Hunterian Museum at the Royal College of Surgeons for gapers and others to be photographed alongside, much as they did in 1782.

Theft of bodies and body parts is illegal. It is also abhorrent given that their subsequent use does not have the express permission of the deceased or the family of the deceased.

The remains of Sarah Baartman, the so-called Hottentot Venus, were returned to South Africa from France in 2002; in May 2007 the Natural History Museum in London returned the remains of 18 Tasmanian Aborigines to their country of origin. It is now time for Charles Byrne's last wish to be honoured. Will the RCS, an organisation with no doubt substantial financial resources at its disposal, allow Charles Byrne to have a decent burial?

Máirín Power London





CURIOSITIES OF THE HUNTERIAN MUSEUM



The Hunterian Museum at the College of Surgeons, Lincoln's-Inn-Fields, is certainly one of the most interesting, yet least visited, of the lions of London. One of the most striking objects on entering the handsome room containing the collection, is the skeleton of Byrne, or O'Brien, the famous Irish Giant, who, we are informed by Mr. Ottley, in his "Life of John Hunter," died in 1783. He had been in a declining state of health for some time previously, and Hunter, anxious to procure his skeleton, set his man Howison to keep watch on his movements, that he might be sure of securing his body at his death. Byrne learned this, and, as he had a horror of being dissected, determined to take such precautions as should ensure his not falling into the hands of the doctors. He accordingly left strict orders that his body should be watched day and night until a leaden coffin could be made, in which it was to be inclosed, and carried out to sea, and sunk. Byrne died soon after, and, in compliance with his directions, the undertaker engaged some men to watch the body alternately. Howison soon learned this, found out the house where these men went to drink when off duty, and gave information to Hunter, who forthwith proceeded thither, with the view of bribing them to allow the body to be carried off. He had an interview with one of the party at the alehouse, and began by offering him fifty pounds if he would allow the body to be kidnapped. The man agreed, provided his companions would consent, and went out to consult them. He returned shortly, saying they must have a hundred pounds. Hunter consented to this, and thought the affair settled; but the men, finding him so eager, soon came back with an increased demand, which was also

agreed to, when further difficulties were found, and larger and larger demands made, until, it is said, they raised the price to five hundred pounds! The money was borrowed from a friend to pay them; and in the dead of the night the body was removed in a hackney-coach, and, after having been carried through several streets, was transferred to Hunter's own carriage, and conveyed immediately to Earl's Court (now a lunatic asylum). Fearing lest a discovery should take place, Hunter did not choose to risk the delay which the ordinary mode of preparing a skeleton would require; accordingly, the body was cut to pieces, and the flesh separated by boiling; hence has arisen the brown colour of the bones, which in all other respects form a magnificent skeleton. This is not the only instance of the enormous sums the immortal founder of the museum gave for objects to enrich it. His eagerness to obtain rare and valuable specimens often led him to pay more than its worth for an object he desired to make his own. In his valuable contribution to the "Transactions of the Royal Society," on the Economy of Whales, he mentions the fact, that, finding it impossible to "obtain proper subjects on which to pursue his inquiries to the extent he desired, he engaged a surgeon, at his own expense, to proceed to the North in a Greenland whaler, after having given him such anatomical instruction, and provided him with such other means as would, he supposed, enable him to obtain some valuable information respecting the whale tribe. But his choice of a messenger proved an unfortunate one; for all that he got, in return for his trouble and expense, was a bit of whale's skin, with some barnacles stuck on it.

Source: The Penny Satirist, Saturday 15th 1845, issue 413, p. 1.

THE LIVING COLLOSSUS! OR WONDERFUL IRISH GIANT

Just arrived in London, and to be seen in an elegant Apartment, at the Cane-shop, in Spring Garden Gate, next Door to the House late Cox's Museum, The Living Collossus, or wonderful IRISH GIANT, Only 21 Years of Age, measures Eight Feet Two Inches high: This extraordinary young Man has been by abundance of the Nobility and Gentry, likewise of the Faculty, Royal Society, and other admirers of natural curiosities, who allow him to surpass any thing of the same kind ever offered to the public. His address is singular and pleasing, his person truly shaped and proportioned to his height, and affords an agreeable surprize; he excels the famous Maximillian Miller, born in 1674, shewn in London in 1733, and the late Swedish Giant will scarce admit of comparison. To enumerate every particular would be too tedious, let it suffice to say, that he is beyond what is set forth in ancient or modern history. The ingenious and judicious, who have honored him with their company, have bestowed the greatest encomiums on him, and on their deparature have expressed their approbation and fascination. In short, the sight of him is more than the mind can conceive, the tongue express, or pencil delineate, and stands without a parallel in this, or any other country.

"TAKE HIM FOR ALL IN ALL, WE SHALL SCARES "LOOK ON HIS LIKE AGAIN."

SHAKESPEARE

Ladies and Gentlemen are respectfully informed, that the hours of admittance are from eleven in the morning till four in the afternoon; and from six to seven in the evening every day Sundays excepted.

Admittance 2s. 6d.

Source: Morning Herald, Tuesday April 23rd 1782, Issue 462.

The Lancet June 14, 1980

THE IRISH GIANT

NEW OBSERVATIONS CONCERNING THE NATURE OF HIS AILMENT

Sir, - Charles Byrne, the Irish giant who attracted considerable interest when he came to London in 1782 and whose skeleton is one of the main attractions of the Hunterian Museum, continues to yield up new findings almost two hundred years after his death in 1783 at the age of 22 years.

Sir Arthur Keith and Harvey Cushing showed by direct inspection of the pituitary fossa that Charles Byrne had a pituitary adenoma causing the extraordinary growth of his body. This was confirmed in 1963 by a skull radiograph which demonstrated enlargement of the sella turcica. Some new insights have now been provided by a reinspection of the skeleton, by a radiograph of its right hand kindly obtained by the curator of the museum, Miss Elizabeth Allen, by some measurements mentioned in the museum catalogue, and by other measurements obtained from a photograph provided by the Hunterian Museum. On both wrists the distal epiphyseal lines of the radius areopen. This is not mentioned in the published description of the skeleton, but is confirmed by the radiograph (see figure). John Hunter must have noted this because he used additional nails and wires to secure the radial epiphyses. Comparison with an atlas of skeletal development shows that Charles Byrne had a bone maturity of only 17 years. Skeletal maturation therefore was retarded.



Radiograph of right wrist of Charels Byrne (O'Brien). Arrows mark open epiphyseal cleft.

Measurements of the skeleton are compared with the normal values of a longitudinal growth study; the differences are expressed in standard deviation scores (SDS) (see table). A comparison of the dimension of the skeleton with today's normal growth values may not be valid because of secular acceleration of growth over the past two centuries. However, comparison with contemporary data would result in even higher SDS values. The SDS value of the body height is extreme and excludes the possibility that Charles Byrne was just "a tall man". The relation of the height, sitting height, and subischial leg height demonstrates that the giantism was harmonic and not eunuchoidal. The measurements of the head, shoulder width, and pelvic diameter give relatively lower SD scores in comparison to the body height. This is the exact opposite to the anthropometric signs produced by growth hormone deficiency. These data confirm that Charles Byrne had suffered from a growth-hormone-producing adenoma. The tumour apparently did not affect the gonadrotrophin production during early ado-lescence since no eunuchoid proportions ensued. However, gonadalfunction was probably insufficient at a later age, as demonstrated by the retardation of skeletal maturation. We suggest that by then the adenoma had destroyed the hypophysical gonadotrophic function.

The figure is reproduced by the permission of the President and Council of the Royal College of Surgeons of England.

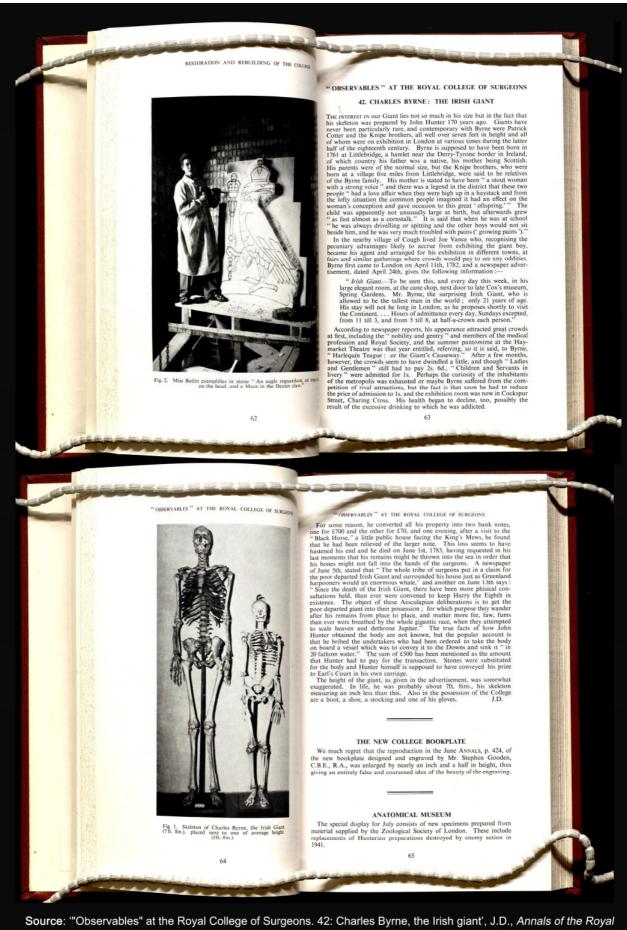
ANTHROPOMETRIC MEASUREMENTS OBTAINED FROM THE SKELETON OF CHARLES BYRNE IN COMPARISON TO THE NORMAL VALUES OF A LONGITUDINAL GROWTH STUPY⁷

	Measurement (m)	SDS*
Standing height	2-31	+7-7
Sitting height	1.16	+6.4
Standing subischial leg height		
(standing height minus sitting height)	1.15	+6.7
Bihumeral (shoulder) width	0.52	+5.5
Biiliac (pelvis) width	0.36	+4.6
Head circumference	0.593	+2.3
Fronto occipital diameter	0-214	+3.1
*SDS (x x)+s, where x measurement, x males at age of 20 years, and s standard devia		ng adult Swiss

Departments of Neurosurgery and Paediatrics University of Zürich CH-8091 Zürich Switzerland

A. M. Landolt M. Zachmann

Source: Lancet, June 14, 1980, pp. 1311 - 1312.



Source: "Observables" at the Royal College of Surgeons. 42: Charles Byrne, the Irish giant', J.D., *Annals of the Royal College of Surgeons*, Vol. 13 (1953), pp. 63-65.

HOW AN IRISH GIANT AND AN 18TH-CENTURY SURGEON COULD HELP PEOPLE WITH GROWTH DISORDERS

IRELAND IS A LAND OF GIANTS, BUT COULD A GENETIC VARIATION BE BEHIND THE MYTH? AND COULD IT HELP PEOPLE WITH GROWTH DISORDERS?

VIVIENNE PARRY

In April 1782, a real, live giant appeared in London. Charles Byrne was said to be a majestic 8ft 4in (2.54 metres) in height and able to light his pipe on street lamps. Now, the macabe events that took place after his death have finally allowed modern genetics to deliver a new twist to the story of the "frish Giant" – and could change the lives of patients today.

From double-headed cows to eight-legged pigs, the Georgians paid handsomely to gawp at all manner of wondrous creatures, and also people afflicted by rare conditions; bearded women, dwarves and giants, After death, many found their way to John Hunter, the anatomista and founder of modern surgery, who was an obsessive collector of anatomical curiosities. It is almost certain that he met Byrne – perhaps one of the tallest men ever to have lived – and decided that he had to have his skeleton.

But Byrne had other ideas. He not only refused Hunter's requests for his body but asked to be buried at sea to make it an impossibility. Hunter was undeterred and, as Byrne's health deteriorated, had the young man followed. In 1783, aged just 22, Byrne died and, according to his wishes, his coffin was taken to the coast by friends. Hunter's agents then sprung into action, getting the friends drunk before switching the body for stones. Hunter then boiled the corpse for 24 hours to procure the bones and hid the skeleton, not during to show it for many years.

Today, we would recognise Byrne's gigantism as being caused by a tumour in the pituitary, the endocrine gland that secretes many essential hormones, including ones for growth. Depending on the patient's age at the onset of the tumour, either gigantism or acromegaly (typically characterised by excessive growth of the jaw, hands and feet) develops but there are other problems, such as delayed puberty.

Márta Korbonits, a professor of endocrinology and metabolism at Barts and the London NHS Trust, has a special interest in an inherited form of pituitary turnour called familial isolated pituitary adenoma (Fipa), in particular a type caused by a variant in the AIP gene, She had already come across a family with several affected members in their recent history who hailed from County Tyrone, the same part of Ireland as Byrne. She began to wonder if they were linked – but to find our she needed some of his DNA.

In 2008, with the assistance of the Hunterian Museum at the Royal College of Surgeons in London, where Byrne's skeleton is displayed, she was able to send two of his teeth off to a German lab more used to extracting DNA from recovered sabre-toothed tigers. Korbonits wasn't initially very hopeful of an answer: "The lab had never had a sample that had been cooked for 24 hours," she explains.

While she waited for the results, a man with a particular curiosity about Byrne, 58-year-old Irish businessman Brendan Holland, had got involved with TV documentary-maker Ronan McCloskey. Brendan, like other members of his family, had been affected by a pituitary tumour as a teenager, It was removed but left its mark.



MARTA KORBONITS, BRENDAN HOLLAND IN FRONT OF THE SKELETON OF CHARLES BERNE PROSERVED IN THE HUNDERIAN MUSICIAL, LONDON, PROTOGRAPIC LINDA NYULIND FOR THE GUARDIAN

Holland is 2.06m (6ft 9in) tall, though still a foot shorter than Byrne, whose teal beight was 2.34m (7ft 8in). Both Holland and McCloskey came from Tyrone and were fascinated by the number of actual giants in the area, and by the way they figured in Irish folklore not as freaks, but as kings, seers and poets.

Holland was tested and found to have the AIP mutation. Then Korbonits's results came back – Byrne carried the same mutation, "I always wondered, Why me?" says Brendan. "I've wanted to know all my life. And the connection with Byrne was a bonus."

But was Byrne the first of his kind? Modelling work by Korbonits's team, just published in the New England Journal of Medicine, showed that both Byrne and today's patients inherited their genetic variant from the same common ancestor and that this mutation is some 1,500 years old. There reaBy were giants in Ireland in far-off times.

The scientists' calculations show that some 200 to 300 living people might be carrying this same mutation today, and their work makes it possible to trace carriers of this gene and treat patients before they grow to be a giant.

Holland feels nothing but sympathy for Byrne. "He was a man born at the wrong time," he says, "He knew he wasn't well and he was genuinely an object of fascination at a time when the average man was only 5ft 5in. Eve learned to five with it; Byrne never could." As for Hunter, in his haste to boil the body he never looked inside Byrne's skull, where the indentation of a pituitary turnour is plain to see. Had he done so, the cause of gigantism would have been another of his medical firsts.