History of Science, Technology and Medicine Network of Ireland in Association with the Royal Dublin Society Library and Archives
RDS, Dublin
13th – 14th October 2017

Friday, 13th October

09:00–9:45 **Registration**

9:45–10:00 **Introductory Address (RDS President, Ms Bernie Brennan)**

10:00–11:00 Session 1: RDS Radium Institute

Location: Merrion Room

Adrian Kirwan (RDS Library & Archives Bursary Recipient)
"The RDS Radium Institute and the practical application of science: physics and medical research in early twentieth-century Ireland."

11:00–11:30 Coffee/tea

11:30–13:00 Session 2A: Mathematics

Chair: Margaret Buckley **Location:** Presidents Room

Jennifer Egloff (Zayed University)
"Geometrical Measurement Techniques in Sixteenth-Century England: Promotion and Resistance"

Kevin Tracey (Swansea University)
"Collecting a mathematical method: Ramist rhetoric in print and practice in sixteenth-century Germany"

Andrew Morris (Vrije Universiteit Brussel)
"John Smeaton and the Debate over the Conservation of Motive Force in Inelastic Collisions"

11:30–13:00 Session 2B: Alcoholism and Treatment

Chair: Dr. Fiachra Byrne **Location:** Merrion Room

Alice Mauger (University College Dublin)
"'Both an insanity and a cause of insanity?': the treatment of alcoholism in Irish asylums, c.1890-1921"

Conor Reidy (Freelance Researcher)
"Prisoners, patients or addicts? Missed opportunities in the inebriate reformatory system in Ireland, c.1900-30"

Holly Dunbar (University College Dublin)
"'this large and pathetic group for whom nobody else is responsible': health promotion to men with alcohol problems in HMP Wandsworth in the 1960s"

13:00–14:30 Lunch

14:30–15:30 Session 3: Mental and Physical Health

Chair: Dr. Fiachra Byrne **Location:** Merrion Room

Triona Waters (Mary Immaculate College)
"A History of Lunacy and the Treatment of in Limerick City and County During the lead-up to the city's official District Lunatic Asylum"

Conor Heffernan (University College Dublin)
"Marshalling Change in the Fleshy Body: Physical Culture in 1900s Ireland"

15:30–16:00 Coffee/tea

16:00–17:30 Session 4A: Astronomy, Alchemy and Technology Education

Chair: Dr. Elizabethanne Boran **Location:** Presidents Room

Sue Hemmens (Marsh's Library)
"Collaboration and Controversy: Witnessing the Cosmos in Early Modern Dublin"

Conleth Loonan (Independent Researcher)
"Richard Stanihurst: Dubliner and Alchemist"

Malin Starrett (Independent Researcher)
"Losing the Run of Oneself – Educational Blockages with Entertainment Technologies"

16:00–17:30 Session 4B: Medicine and Social Policy

Chair: Dr. Juliana Adelman **Location:** Merrion Room

David Kilgannon (National University of Ireland, Galway)
"'Surely during this international year, some things have to finally change': Irish disability activism and the United Nations' International Year of Disabled Persons (1981)"

Margaret Buckley (University College Cork)
"The Old Age Pension and Mortality"

John Cunningham (Queens University Belfast)
"Medicine, Politics and Religion in Ireland, c. 1650 – c.1700"

17:30 – 18.30 Keynote Address

Location: Library

Professor Emeritus Henry Powell (University of California, San Diego)
"Public Influence and Medical Progress"

18:30 – 19.30 Wine Reception

19.30 Conference Dinner (RDS Member's Club)

Saturday, 14th October

10:00–11:00 Session 5A: Gender & Debate

Chair: Dr. Ida Milne **Location:** Presidents Room

Emma Swain (Queen's University Belfast)
"Science, Gender and Animals in the *Spectator*, 1870 – 1900"

Jessica Y. Neasbitt (University of California, Santa Cruz)
"Relieving the Suffering of a 'Perverse and Mysterious Sex': J. Marion Sims and the Birth of U.S. Gynaecology"

10:00–11:00 Session 5B: Mathematical Contributions, and Aeronautics

Chair: Max Meulendijks **Location:** Merrion Room

Edward Collins (University College Dublin)
"Pedro Nunes and the Diffusion of Portuguese Science in England and Ireland"

Jeremy R. Kinney (Smithsonian National Air and Space Museum)
"Speciality, Reinvention and Revolution: The Propeller and the Modern Airplane, 1917 – 1945"

11:00-11:30 Coffee/ Tea

11:30–13:00 Session 6A: Epidemic Disease, Society and Medicine

Chair: Margaret Buckley **Location:** Presidents Room

Patricia Marsh (Queens University Belfast)
"'Woe unto them that are with child': Gender and the Spanish Influenza pandemic in Ulster"

Ida Milne (NUI Maynooth and Queen's University Belfast)
"Talking History: Oral Histories of Infectious Diseases of Childhood"

John Stewart (Glasgow Caledonian University)
"'Social Factors Related to Medicine': Richard Titmuss and the Royal Commission on Medical Education, 1965 – 68"

11:30–13:00 Session 6B: Vaccination, Statistics and Natural Selection

Chair: Dr. Juliana Adelman **Location:** Merrion Room

Baptiste Baylac-Paouly (Universite Claude Bernard)
"Vaccine Development and Collaborations: Lessons from the history of the Meningococcal A Vaccine"

James Grannell (University College Dublin)
"A Numbers Game: The Veracity of HIV/AIDS Statistics for 1980s Ireland"

Max Meulendijks (Queens University Belfast)
"The Parasites of Empire: Politics, migration and the Darwinisation of Medicine"

13:00–14:00 Lunch

14:00 – 15:00 Session 7: Medical Writings

Chair: Dr. Elizabethanne Boran **Location:** Merrion Room

Francesca Minen (University of Venice)
"The Understanding of Skin and the Body in Ancient Mesopotamian Documentation"

Susan Mullaney (Trinity College Dublin)
"'Of Flies and Sunbeams': A 15th Century Irish Medical Textbook in the Modern Era."

15:00 – 16:00 Concluding Remarks

Abstracts of Presentations

Session 2A: Mathematics

Jennifer Egloff (Zayed University)

Geometrical Measurement Techniques in Sixteenth-Century England: Promotion and Resistance

During the sixteenth century, there was increasing use of the notion of "proof," for both religious and mathematical matters. However, although there was relatively rapid and wide-scale acceptance of Scriptural proof in religion, some individuals were resistant to adopting geometrical measurement techniques, despite appeals to mathematical proof.

Analysis of Leonard Digges's and Richard More's didactic texts illustrates that between the mid-sixteenth century and the early seventeenth century, many artisans resisted adopting geometrical measurement techniques, despite the fact that didactic literature—including instruction in Euclidian geometry—was readily available.

First published in 1554, Digges's *Tectonicon* encouraged artisans to abandon rule-of-thumb measurement methods that they had learned orally and by demonstration via their apprenticeships, in favor of precisely made rulers, and geometrical techniques. However, More's *Carpenters Rule*, published in 1602, illustrates that many of the same faulty rules continued to be used half-a-century later. In addition to promoting practical geometrical methods, More encouraged readers to learn geometry via Henry Billingsley's 1570 English translation of Euclid's *Elements of Geometry,* or by attending lectures at Gresham College.

I argue that individuals' decisions whether to adopt geometrical measurement techniques were likely related to numerous practical concerns, rather than a desire to achieve "mathematical truth." These included the temporal and monetary investment required to learn new skills, the risks versus potential rewards of new methods, the criteria by which expertise was defined in their professions, and the logistics of implementing these techniques in practical situations. Ultimately, I show that the availability of vernacular mathematical instruction, did not guarantee that mathematical techniques would be adopted on a popular level.

Kevin Tracey (Swansea University)

Collecting a mathematical method: Ramist rhetoric in print and practice in sixteenth-century Germany

Bound up with Peter Ramus's *Arithmeticae libri duo, Geometriae septem et viginti* (1580) and a 1580 edition of Peckham's *Perspectivae communis*, the Science Museum's copy of Thomas Fincke's *Geometriae rotundi* (1583) is a unique example of the collection and use of mathematical texts in the early modern period. Littered with marginalia and marked by provenance inscriptions, it displays evidence of the reading methods early modern users – be they students, teachers, or autodidacts – brought to bear upon their volumes.

A precocious 22 years old at *Geometriae rotundi*'s publication, Fincke's work was later hailed by Kepler and Napier, and borrowed without reference by the astronomer Bartholomaeus Pitiscus. As a doctor and influential figure at the University of Copenhagen, Fincke went on to influence the careers of many famed Danish mathematicians and scientists. For the three identifiable users reading this collection between 1586 and 1591, however, the author was a near contemporary, and an advocate of the Ramist methods sweeping Germany.

This paper offers a synthetic reading of Thomas Fincke's Ramist influences and their impact upon his nearest audience. I argue that the rhetorical presentations found within *Geometriae rotundi* were structured to create space for novelty via participation with literary and pedagogical cultures. By analysing evidence of engagement with the material and intellectual properties of these texts, I will show how its users responded: by collating, reviewing, and, ultimately, remaking mathematical authority. Finally, this paper ends by considering how this unique collection of print and manuscript may help inform histories of collecting.

Andrew Morris (Vrije Universiteit Brussel)

John Smeaton and the Debate over the Conservation of Motive Force in Inelastic Collisions

Since the seventeenth century, natural philosophers have agreed that motive force was conserved in collisions. In this paper, I would like to give an account of how this consensus was interrupted for a fairly short period at the end of the eighteenth and beginning of the nineteenth centuries. Partisans of the controversial theory of *vis viva*, or living force, claimed that motive force was lost in inelastic collisions, because, they argued, some force must be used up in changing the shape of a body. It was only in the 1840s that it was accepted that *vis viva* – which became known as energy – was not lost, but transformed into heat.

Between 1752 and 1782, British engineer John Smeaton carried out a series of experiments which showed that motive force was lost in inelastic collisions, and that this loss explained the difference in efficiency between undershot and overshot waterwheels. I will examine how this viewpoint gained traction, and how the earlier insistence on the conservation of motive force – shared by Cartesians, Leibnizians and Newtonians – was temporarily suspended as the new scientific and technological outlook of the industrial revolution emerged. According to this outlook, industrial productivity was predicated on the expenditure of labour, and thus motive force, in the manufacture of useful or valuable objects, thereby contradicting the claim that motive force was conserved.

Session 2B: Alcoholism and Treatment

Alice Mauger (University College Dublin)

'Both an insanity and a cause of insanity?': the treatment of alcoholism in Irish asylums, c.1890-1921

To date, there has been little consideration of medicine's influence on attitudes towards, provision for and treatment of alcoholism in Ireland. While the long held "drunken Irish" stereotype, still prevalent today, has been assessed from several viewpoints, there has yet to be an investigation of how Irish medical communities interpreted, informed and/or absorbed this labelling.

The 1890s was a pivotal juncture for medical understandings of alcoholism as it now became recognised more as a disease than a vice. While the Irish medical community continually debated whether alcoholism was a cause of insanity – or insanity itself – asylums increasingly became the principal receptacle for alcoholics. By 1900, 1 in 10 Irish asylum admissions were attributed to intemperance.

This paper will explore the evolution of medicine's role in framing and treating alcoholism in Ireland, from the 1890s until the creation of the Irish Free state in 1922. Centring on provision in public, voluntary and private asylums, medical discourses and shifting government policies surrounding care, treatment and health implications, it will question how, why and to what extent medicine came to influence the treatment, care and rehabilitation of alcoholics in Irish asylums. In doing so, it will assess how class, gender, religious persuasion and ethnicity influenced diagnosis, institutionalisation and treatment.

Conor Reidy (Freelance Researcher)

Prisoners, patients or addicts? Missed opportunities in the inebriate reformatory system in Ireland, c.1900-30

The 1898 Inebriate Act (Ireland) established four institutions, three of which were used for the treatment and punishment of habitual criminal alcoholics; the state reformatory for criminal drunkards (Ennis, 1900), St. Patrick's Certified Reformatory for Men (Waterford, 1906), St. Brigid's Certified Reformatory for Women (Wexford, 1908), and The Lodge, Certified Inebriate Retreat for voluntarily-admitted fee-paying Protestant women (Belfast, 1903). None of the three southern institutions survived beyond the end of the First World War.

While the founders failed to define the institutions as penal, medical or something in between, a significant feature of the system, both in Britain and Ireland, was the

disproportionately higher number of women detained for alcohol-related criminality. Historians have posited numerous reasons to account for this imbalance including the 'reclamation of women as the future wives and mothers of a healthier imperial race'. (Hunt, Mellor and Turner, 1990)
Despite a vigorous medical debate on alcohol-related criminality both in Britain and Ireland, these institutions amounted to a missed opportunity to take advantage of, or even engage with, emerging science. This paper will examine the reform processes, questioning the extent to which the absence of psychological and medical methods made recovery impossible. To what extent were they either penal or curative? Were they designed for treatment or control? The paper will conclude that the failure to define inmates either as prisoners or addicts created insurmountable difficulties for those working in the system and brought about its inevitable early decline.

Holly Dunbar (University College Dublin)
'this large and pathetic group for whom nobody else is responsible': health promotion to men with alcohol problems in HMP Wandsworth in the 1960s

In 1962, the Royal London Discharged Prisoners' Aid Society initiated a scheme at HMP Wandsworth which sought to support and treat some of the men imprisoned for alcohol-related crimes, but who received little care after leaving the prison. Despite widespread acknowledgement that alcohol-related offences were a significant social problem, there were many obstacles to implementing this initiative. In 1953, the Maxwell Report on after-care argued that Discharged Prisoners' Aid Societies should focus on those most likely to be reformed, not repeat and drunk offenders. Adding to this, the Prison Medical Officer (PMO) was responsible for inmates officially diagnosed as alcoholics and he was disinclined to allow the Discharged Prisoners' Aid Society to work with his patients.

Drawing upon the annual reports of the Royal London Discharged Prisoners' Aid Society, Home Office papers, records of the National Council on Alcoholism, and the Church of England Temperance Society, this paper will use the Wandsworth scheme as a case study. The paper will explore the roles played by the state, charities and religious philanthropists in providing for prisoners' health and health promotion in relation to alcohol. The spaces where alcohol was consumed and the social class of those drinking effected views about its impact on health and the likelihood that drinking would result in crime. Equally, stigma attached to imprisonment and alcoholism influenced opinions as to who was deserving of healthcare and health promotion.

Session 3: Mental Health, Physical Health and Psychiatry

Triona Waters (Mary Immaculate College)
A History of Lunacy and the Treatment of in Limerick City and County During the lead-up to the city's official District Lunatic Asylum

Precedent to the official Irish District Lunatic Asylum system setup, Limerick city and county were witness to significant levels of paucity in the early 1800s where little distinction was made between the pauper and the pauper lunatic. Both were subjected to the method of incarceration where various institutions working on a voluntary capacity held the onus of housing local lunatics at large. Those medically branded as 'lunatic' were witness to the 'inhumanity of the Georgian world' where 'people were almost incomprehensively brutal. The insensitivity and inhumanity was not confined to the wilful inflicting of pain; it showed also in the almost absolute neglect of poverty, illness and starvation.' This paper will examine the treatment of lunatics in Limerick city and county from the early 1800s up until the official opening of LDLA in 1827. It will reveal the lacking of official lunatic-care practice within the local House of Industry that, at the time, gave feed to the argument of opening an official lunatic asylum. This in turn will demonstrate what qualified those to be dubbed a lunatic in terms of administrative protocol regarding admittances into the newly-established asylum.

Conor Heffernan (University College Dublin)

Marshalling Change in the Fleshy Body: Physical Culture in 1900s Ireland

The history of medicine is undoubtedly a field concerned with change. Changes in technologies, discourses and of course, changes in the human condition. While many histories are concerned with unwanted changes in the body brought on by disease or neglect, the following presentation looks at change from an entirely different viewpoint. What happens when humans seek to change their body in search of a perceived betterment? What technologies do they use and how do they come to understand the changes within their own fleshy body?

Utilizing the case of physical culture in early 1900s Ireland, the presentations examines how weightlifting and gymnastic activities were harnessed by Irishmen and women to build muscle, lose weight and improve their mental health. Far from a trivial or vain endeavour, such changes were often linked to loftier ideals such as improving one's general demeanour, social mobility or even their 'vital life force'. Through an examination of previously unstudied periodicals, the presentation utilises the work of Michel Foucault, Judith Butler and Pierre Bourdieu to understand how the fleshy body underwent transformation through weight training both consciously and unconsciously. This it is argued, brought individual subjects into a greater understanding of not only their own experience but was seen as means of transforming that all so elusive 'self'. Thus subjects willingly brought about bodily change in the hope of affecting their own sense of identity, well being and status within society.

Session 4A: Astronomy, Alchemy and Technology Education

Sue Hemmens (Marsh's Library)

Collaboration and Controversy: Witnessing the Cosmos in Early Modern Dublin

The purposes of natural philosophy included the continuation of the humanist programme of enquiry into the nature and history of the cosmos, as into the histories of created beings. The reading of the status of the earth as created system, and the reading of the nature of the creator through creation gave rise to particular tensions, not least those with implications for the stability and order of church and state. Narcissus Marsh and William Molyneux provide the central case studies for this paper. Marsh's background in biblical criticism and the mechanisms of logic led him to attack both John Keill and John Toland for their interpretations of the books of nature and of scripture. The tensions surrounding the account of creation in Genesis excited the lively interest of Marsh, as did the celestial phenomena to be observed with his telescope. William Molyneux's work on optical phenomena and instrumentation, and his correspondence with the prominent London astronomers Edmond Halley and John Flamsteed show exchange, testing and correction of observations, and awareness of publications which communicated interpretations of these observations. Many meteorological and astronomical observations were collaborative, with the experiences of many observers collated for one event, or group of events. Collaboration and comparison was a particularly significant aspect of astronomical observation. Data from observed phenomena were shared in the public sphere of print and in the private sphere of personal correspondence, with significant transfer from one to the other.

Conleth Loonan (Independent Researcher)

Richard Stanihurst: Dubliner and Alchemist

Richard Stanihurst (1547 – 1618), born in Ship Street close to Dublin Castle, was a noted polymath whose interests ranged from Aristotelian philosophy, through poetry in English and Latin, translation of Virgil's *Aeneid*, to two well-known works on Irish history, to, in later life, works of a devotional nature, including a biography of St Patrick.

But Stanihurst had another abiding interest: Alchemy, a pursuit that may well have been fostered by his nine years spent as tutor to the children of Gerald Fitzgerald, eleventh

Earl of Kildare, remembered as 'The Wizard Earl' and with a reputation in folklore as a magician.

Within the ambit of practical Alchemy two important areas are: the transmutation of the lower metals into the noble metals of silver and gold, and the laboratory preparation of chemical remedies. This latter interest proved most useful when Stanihurst, by that time a recusant exile in the Spanish Netherlands, on the strength of having produced a wondrously efficacious alcohol-based gold elixir, was summoned by royal edict to the Escorial in Madrid to treat the sickly Hapsburg king Philip II.

His other consuming alchemical interest – transmutation of metals – is attested to in the surviving records from his time in London, to his time in Belgium, and in the three years spent at his purpose-built laboratory at the Escorial. In his later career he came under the influence of the revolutionary medic and alchemist Paracelsus, whose writings were in the process of being published during Richard's time in the Spanish Netherlands.

Malin Starrett (Independent Researcher)

Losing the Run of Oneself – Educational Blockages with Entertainment Technologies

For many years, U.K. school science education has nearly completely avoided teaching children about how entertainment technologies work. Children leave school with little or no conscious knowledge of the central operating principles of cinema, T.V., recorded sound and radio. All these technologies have recently converged with the internet, accessible through one machine – the smartphone.

This talk will highlight one central factor which has inhibited U.K. school science education from exploring the operating principles of entertainment technologies with pupils. This factor involves all these technologies relying on a close marriage between the perceptual processes of the human being and the machine to produce sounds and pictures. The 'subjective' and 'objective' weave together in entertainment technologies to produce the content. U.K. school science education presently embraces an exclusive 'subjective'-'objective' separation – in line with the roots of modern western science – and this makes education regarding entertainment technologies difficult.

Session 4B: Medicine and Social Policy

David Kilgannon (National University of Ireland, Galway)

'Surely during this international year, some things have to finally change': Irish disability activism and the United Nations' International Year of Disabled Persons (1981)

This paper examines the 1981 UN International Year of Disabled Persons and its impact on intellectual disability issues in Ireland. First proposed in 1976, this UN global observance year aimed to instigate a range of policy changes around the rights of the disabled across UN member states. Yet, in Ireland, the practical implementation of the UN's wide-ranging goals often produced a stark disjuncture between international aspirations and Irish realities.

The paper begins with an overview of the range of available intellectual disability services in 1980s Ireland. It then moves on to examine the role of voluntary activism in Irish disability services, arguing that the greatest success of the UN year lay in its influence on local disability activists. Using a combination of newspaper coverage, oral history interviews and archival material, it will argue that the UN year served to promote a clear shift in the tenor of domestic disability activism, producing a greater internationalist outlook among Irish advocates.

Yet, despite this change in outlook, the paper also spotlights the contested application of the UN's international ideals to the vested interests and operational norms of domestic Irish politics; arguing that the UN year had a negligible impact on state policies and actions around intellectual disability. Thus, this paper presents an examination of both the build-up to, and subsequent impact of, the events of the 1981 global observance year on a single state. Yet, in doing so it will highlight how the UN's international standards were translated into a local context.

Margaret Buckley (University College Cork)
The Old Age Pension and Mortality

During the nineteenth century, life expectancy for people in Ireland was just 49, rising to 53 in the first two decades of the twentieth century. It has continued to rise throughout the twentieth century and up to the present day.

The cause for this rise in life expectancy has been explained by Thomas McKeown as less to do with modern medical advances and more with public policies such as sanitation, housing and social welfare. The biggest increase was seen in the first years of the Old Age Pension. The Old Age Pension was the first social policy of the twentieth century which garnered tangible evidence of effectiveness – increased life expectancy.

Using Limerick City as a microcosm for the rest of Ireland, through the use of burial ground records, it is possible to track social change, life expectancy and mortality using the most absolute of measures – when and at what age people died. The initial years of the Old Age Pension saw the first definite increase in the average age at death in fifty years, and commenced the higher life expectancy for older women which continues to this day. This can be explained as the first instance of financial independence for older women and also, the first instance where the workhouse was not an inevitable conclusion for people in lower socioeconomic classes. It is also incontrovertible evidence of the effectiveness of the welfare state.

John Cunningham (Queens University Belfast)
Medicine, Politics and Religion in Ireland, c. 1650 – c.1700

This paper will explore some of the intersections between medicine, politics and religion in Ireland in the period 1650-1700. To what extent did the considerable political and religious divisions of the period shape the medical landscape? How far did the possession of medical expertise enable individuals or groups to work around and across such divisions? What can be recovered about patients' choosing of practitioners and what role did cultural factors play in such choices? The paper will consider evidence relating to doctors, apothecaries and surgeons, with a particular focus on the city of Dublin. The Dublin College of Physicians and the city's barber-surgeons' guild each generated important bodies of material that can be exploited to address key questions about medicine and its relationship to the wider political and religious contexts of the period. Other useful perspectives can be gleaned from sources including correspondence, accounts and wills. The paper will draw upon research conducted as part of the 'Early Modern Practitioners' project at the University of Exeter. One of the aims of that project is to make available a prosopographical database of medical practitioners in England, Wales and Ireland in the period between 1500 and 1715 (see practitioners.exeter.ac.uk).

Session 5A: Gender & Debate

Emma Swain (Queen's University Belfast)
Science, Gender and Animals in the *Spectator*, 1870 – 1900

In the second half of the nineteenth century, engagement in the British periodical press with debates about animal instinct and intelligence was widespread. This paper will consider the correspondence pages of the influential British weekly, *The Spectator*, which throughout the late-Victorian period provided a forum for a lively discussion on animal instinct and intelligence. The anecdotal method of George J. Romanes, a leading scientific figure in the animal intelligence debates, proved popular amongst readers of the *Spectator*. By providing anecdotes, correspondents became participants in a wider scientific debate, and helped generate a particular form of amateur or 'citizen' science.

A key feature of this anecdotal science was its gendered character. Over the course of the nineteenth century an increasingly professionalised and institutionalised scientific culture had become associated with traditionally masculine traits, such as rationalism. Women, stereotypically considered as emotional and therefore irrational, were increasingly

excluded from science. However, in the correspondence pages of the *Spectator*, participation in the animal instinct and intelligence debates was not the sole concern of men. The newspaper provided a space for both men and women to participate in amateur science. This paper will consider how stereotypical Victorian gendered notions of masculinity and femininity were re-established, and/or complicated, through the correspondence. It will argue that the anecdotal observations published from male and female readers were characterised by their adherence to, and/or rejection of, accepted traditional gender roles.

Jessica Y. Neasbitt (University of California, Santa Cruz)
Relieving the Suffering of a 'Perverse and Mysterious Sex': J. Marion Sims and the Birth of U.S. Gynaecology

J. Marion Sims is widely acknowledged as the "father of American gynecology" for his development of one of the first successful vesicovaginal fistula repair surgeries. Sims developed this surgery by experimenting on enslaved women in the antebellum South in a makeshift hospital behind his Alabama home between 1845 and 1849. Historically presented as a pioneer in gynecological surgery and a champion of "suffering womanhood," Sims is largely credited with the development of gynecology as a specialty of women's medicine that sought to treat more than obstetrics' traditional focus of pregnancy and childbirth. Such a narrative overly simplifies the development of this new medical specialty, however, and makes invisible the labour of a multitude of women—patients, charity workers, nurses, and fundraisers—without whom Sims would have been unable to develop and practice the surgical techniques that led to him being hailed the father of U.S. gynecology. Far from being the brainchild of one charismatic surgeon whose aim was to ease "suffering womanhood," U.S. gynecology can more accurately be seen as a development in the pursuit of productive and appropriately embodied femininity, especially as related to enslaved black African women who could no longer perform their duties or move about in public due to the effects of vesico-vaginal fistulas. I forward that examining the genesis of U.S. gynecology as a medical specialty forged at the nexus of gender, race, and pathologization offers valuable insight into both the historical workings of U.S. medicine and those of the present day.

Session 5B: Mathematical Contributions, and Aeronautics

Edward Collins (University College Dublin)
Pedro Nunes and the Diffusion of Portuguese Science in England and Ireland

Pedro Nunes (1502-1578) is considered to be one of the greatest mathematicians of the early modern era. A Portuguese *converso*, he made significant contributions to mathematics, cosmography, astronomy, and nautical science in the sixteenth century.

In addition to being a prolific author of scientific and mathematical works, Nunes is responsible for the creation of nautical instruments designed to perfect the art of navigation. He also identified a number of issues associated with transoceanic travel, such as magnetic declination and the loxodromic curve. His innovations allowed the Portuguese to maintain their reputation as significant modernisers in astronomical navigation in the sixteenth century, decades before the purported dawn of the Scientific Revolution.

In spite of Nunes' body of work and his reputation among his European contemporaries, he is less well known than other non-Portuguese mathematicians and cosmographers of the period, which is perhaps a reflection of the lack of recognition of Portuguese contributions to early modern science.

This paper aims to highlight the contributions of Nunes to science in the sixteenth century, as well as his influence in Europe, particularly in England. It also examines how a particular copy of his 1567 *Libro de Algebra* (Book of Algebra), held at the Archbishop Marsh Library in Dublin, reveals the understated influence of Nunes on mathematics and scientific works in England and Ireland in the sixteenth and seventeenth centuries.

Jeremy R. Kinney (Smithsonian National Air and Space Museum)

Speciality, Reinvention and Revolution: The Propeller and the Modern Airplane, 1917 – 1945

An international community of specialists reinvented the propeller during the Aeronautical Revolution, a vibrant period of innovation in North America and Europe from World War I to the end of World War II. Their shared culture of performance inspired, pushed, and enticed competing visions of expanding the capabilities of aeronautical technology in the name of advancing humankind. They experienced both success and failure as they created competing designs that enabled increasingly sophisticated and "modern" commercial and military aircraft to climb quicker and cruise faster using less power. When integrated into increasingly sophisticated aircraft, the airlines used them to connect the world by airplane and air forces used them to fight a global war in the air. Those modern propellers and their ability to meet different operating conditions helped make the system of the airplane a world-changing technology.

This paper argues that to understand the modern airplane and the community that created it, so much depends upon a contextual understanding of its important parts and the specialists that produced them. The focus on this one component of the airplane offers new perspectives on the nature of aeronautical innovation, engineering, research and development, institutional reactions to technology, and the multi-layered social, cultural, financial, commercial, industrial, and military infrastructure of aviation, which relate to the conference themes of military science and technology and the history of engineering. The main body of evidence consists of archival and published primary sources from repositories including the national archives of the United States and the United Kingdom.

Session 6A: Epidemic Disease, Society and Medicine

Patricia Marsh (Queens University Belfast)

'Woe unto them that are with child': Gender and the Spanish Influenza pandemic in Ulster

At first sight the 1918 influenza pandemic appeared to be indiscriminate. It attacked and killed the very young, the very old, young adults, rich and poor alike. However, there were certain patterns that were specific to the pandemic such as the global peculiarity of how it targeted young adults. Niall Johnson noted that different locations showed a slight difference in mortality between genders, which did not appear to be significant or consistent. Yet the USA, Australia, New Zealand, Norway and South Africa reported noticeably more male deaths than female. The question of gender with respect to Ireland is interesting as official figures for the whole country show that male mortality was higher than female, but in the province of Ulster more women than men died.

This paper will investigate the area of gender and influenza and pose the question 'did the influenza pandemic impact more on men than women in Ireland and in particular Ulster? By analysing the mortality figures with respect to age and gender in Ireland, the province of Ulster and individual counties therein, it will examine if females were at more risk from influenza. Pregnant women were deemed to be at particular risk from influenza during the pandemic and the susceptibility of these Irish women to the disease and their subsequent mortality will be examined. Family commitments, working practices and the areas of female employment including nursing and factory work will be investigated to ascertain if gender was a deciding factor in susceptibility to the disease or was influenza an indiscriminate killer.

Ida Milne (NUI Maynooth and Queen's University Belfast)

Talking History: Oral Histories of Infectious Diseases of Childhood

The societal burden caused by infectious diseases of childhood was heavy and complex until the 1950s, when multiple factors – including vaccination and new medical treatments – combined to reduce the incidence of these diseases, and the numbers of deaths caused by them. The effects of these diseases were often visible in the Irish

classroom, and left their scars on most families. In this paper, sufferers, their families, and medical workers tell how infectious diseases of childhood affected their lives.

John Stewart (Glasgow Caledonian University)
'Social Factors Related to Medicine': Richard Titmuss and the Royal Commission on Medical Education, 1965 – 68

Richard Titmuss was appointed Professor of Social Administration at the London School of Economics in 1950 and from then until his death in 1973 he created, initially almost single-handedly, the academic field of social policy. In 1961 he spoke at the annual conference of the National Association for Mental Health. This was also the occasion when the Conservative Minister of Health, Enoch Powell, made his famous 'water towers' speech which proposed the gradual closing of mental hospitals and their replacement by community care. Titmuss's address critiqued Powell's plans and as part of this argued for the establishment of an official enquiry into doctors' training. For Titmuss this was necessary partly because doctors ought to be 'better equipped to understand and deal with the social and psychological effects of medical care'. His demand was fulfilled after the formation of the Labour government in 1964 and the following year he joined the newly-created Royal Commission on Medical Education. This paper examines Titmuss's contribution to this body in the context of his often critical views about the medical profession and its 'elitist' behaviour. It focusses especially on his arguments for the inclusion of social medicine, of which he was one of the early proponents, and the social sciences in the medical curriculum and what he saw as the benefits of such a radical revision. The paper concludes by assessing the degree to which his demands were met.

Session 6B: Vaccination, Statistics and Natural Selection

Baptiste Baylac-Paouly (Universite Claude Bernard)
Vaccine Development and Collaborations: Lessons from the history of the Meningococcal A Vaccine

In the early 1960s, following numerous warnings, the WHO decided to class meningitis as a public health priority in Africa. In light of its increasing resistance to sulfa-drugs, active immunization appeared to be the best approach to combatting this deadly disease, leading to new initiatives to produce an effective vaccine.

This presentation will trace the history of the production of the meningococcal A vaccine, focusing on the collaborations engaged in the course of this project. The production of the vaccine involved the collaboration of several organisms under the aegis of the WHO: the *Institut Mérieux* in Lyon, the *Centre International de Référence pour les Méningocoques du Pharo* in Marseille, the Rockefeller Institute in New-York (specifically Dr. Emil C. Gotschlich), and many others in order to test the different versions of the vaccine.

In this communication, we will cover a part of this history, considering the period from 1969 to 1973, and especially some key episodes which highlight the importance of this collaborative enterprise for the vaccine production. Indeed, a number of elements seemed to stand in the way of successfully producing a vaccine, and so the collaboration of the different actors under the aegis of the WHO provides some interesting lessons about how to manage this kind of project.

James Grannell (University College Dublin)
A Numbers Game: The Veracity of HIV/AIDS Statistics for 1980s Ireland

This paper will explore the veracity of Irish infection statistics for HIV/AIDS during the 1980s and its impact on the history of the illness in Ireland. From the initial clinical observation of AIDS in 1981, governments and voluntary organisations relied heavily on statistics of infection and death in the formulation of their policies to combat the illness. However, by exploring Irish statistics of infection from the 1980s, which appeared in

Department of Health publications and were widely circulated in publications by voluntary groups and in the Irish media, this paper will demonstrate that this reliance on numbers provided a false image of the prevalence of HIV/AIDS in Ireland.

The movement of people from Ireland to the United Kingdom during the 1980s was a major component in the unreliability of Irish statistics of HIV/AIDS infection. This paper will explore the impact of this phenomenon and will outline the problems this caused for groups aiming to prevent the spread of HIV/AIDS in Ireland. It will also explore the difficulties faced by historians of HIV/AIDS in Ireland who are often reliant on these figures.

The paper will investigate how the classification of people with HIV/AIDS within these statistics as "at risk groups" and later as people who engaged in "risk behaviour" veiled the complexity of transmission patterns in Ireland and, as a consequence, promoted the image of HIV/AIDS as a disease of certain communities. It will will argue that the mode of transmission of the virus was often unclear, something which was only partially acknowledged in official statistics. It will show that the desexualisation of certain groups of people with HIV/AIDS promoted the p idea that it was not a heterosexual disease.

Max Meulendijks (Queens University Belfast)

The Parasites of Empire: Politics, migration and the Darwinisation of Medicine

The development of parasitology as a "Tropical medicine" in the late 19th/early 20th century has been well studied. For its success, it relied on the flexible boundaries of germ theory, pre-existing conceptualisations of moral climatology, and identification with imperial ambitions. Unfortunately, the way in which Darwinian theory was used to confer legitimacy on the discipline of parasitology, and define its aims, has seen little analysis.

This paper emphasises the role of two prominent medical professionals involved in the conceptualisation of parasitical disease in the late 19th/early 20th century. Despite common influences in the work of Patrick Manson, and the theory of Natural Selection, they placed the discipline in very different political narratives. Louis Westenra Sambon, lecturer at the London School of Tropical Medicine and Hygiene, promoted the view that the new findings could incentivise migration. If the empire could be revitalised with migration, it would lead to new evolutionary heights as well. George Archdall O'Brien Reid, a physician and populariser of Darwinism in medical circles, argued that the evidence suggested colonisation was a doomed enterprise. Facing natural limits on migration, the imperial system would show itself to be unsustainable.

The actors varying interpretations of Natural Selection are discussed, as well as the political, biological and medical traditions from which they drew. It is argued that this fault line within parasitology echoed older political disagreements within evolutionary debates.

Session 7: Medical Writings

Francesca Minen (University of Venice)

The Understanding of Skin and the Body in Ancient Mesopotamian Documentation

During the last decades the field of Mesopotamian medicine gained a prominent position in Ancient Near Eastern Studies. The advances in editing and translating cuneiform tablets have helped in shedding more light on the principles of Mesopotamian medical theory and practice. Also, by considering those informations in a comprehensive approach, it is now possible to understand more deeply the notions of anatomy and the body. This is particularly true if we consider the case of dermatology.

The various references to skin ailments – in both medical and everyday documentation, poetic compositions and also an extensive physiognomical literature – confirm also for Mesopotamia the assumption that, anthropologically speaking, the observation of skin played an important role in human interactions since the beginning of history. Medical documents display practices in observing and distinguish skin lesions similar to those of a modern dermatological exams. Further, they offer several magico-medical remedies even for skin diseases which appear to be incurable from other cuneiform sources. Since such diseases were perceived as a mark of sin and as the

resulting divine punishment, they appear to be particularly feared in documentation and often invoked in curses.

After a brief introduction to ancient Mesopotamian medical lore, the presentation will focus on the basics of Mesopotamian dermatology. Particular attention will be devoted also to theconcept of skin itself, which present various terminological and methodological problems. Such view point will allow to focus on how skin was perceived and which role it played in the Mesopotamian conception of the body as a whole.

Susan Mullaney (Trinity College Dublin)

'Of Flies and Sunbeams': A 15th Century Irish Medical Textbook in the Modern Era.

The Book of O 'Lees, translated into Irish in 1434 is unique in Ireland possibly in Europe as a medieval medical textbook, was written as reference work for practitioners and students. The unique design of the manuscript, the pathological content, and a linguistic assessment has allowed Aoibheann Ni Dhonnchadha verify its authenticity.

The Irish volume is a translation of the Latin manuscript, *Tacuini Aegrirudinum*, which was originally translated from Arabic in in the eleventh century by the Islamic physician Ibn Jazlah, the work completed by Farah ibn Salim in Sicily in 1281.

The book attained mythical status, as the Book of O' Brazil, but the fact that one section, on Ophthalmic Disease is translated into English allows a contemporary assessment, revealing a medical textbook describing diseases of the eye, according to their anatomical location.

This talk will describe how it is possible to trace the path the Book of O' Lees from the Mediterranean, and how the descriptions of diseases of the eye from the 11th century are easily recognisable to the present day.