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# Teratology and the clinic

John William Ballantyne and the making of antenatal life

**SALIM AL-GAILANI**

**Prenatal testing and growing awareness of the vulnerability of the embryo and fetus to environmental agents have made the possibility of 'birth defects' ever present in the experience and management of pregnancy. Pregnant women are subject to close medical and public scrutiny, and obstetricians are experts in prenatal physiology and pathology.**

Historians rightly trace routine obstetric monitoring and the emergence of the 'fetal patient' to the mid-20th century and especially the decades after World War II. But fully to understand these innovations, we need to go back further and recover how obstetricians first claimed fetal abnormalities for their discipline.

Around 1900, few pregnant women had any contact with a medical practitioner before going into labour and obstetricians generally considered detailed knowledge about fetal development irrelevant to clinical routine. But fierce public debate about population decline was beginning to lay stress on maternal responsibility for the fitness of future generations. A key participant, the Edinburgh obstetrician John William Ballantyne, is best known as the 'great apostle' of the antenatal care movement around World War I, but was also the leading British authority on teratology, the scientific study of 'monsters'. Historical writing on antenatal care has underplayed how he used this expertise to argue that educating the medical profession and the lay public in the 'value of antenatal life' would improve the population. Bridging the histories of teratology and the medical supervision of pregnancy, Ballantyne's career illuminates how the modern identities of obstetrician and fetus were made.

Historians of biology have described the pivotal role that monsters played in Enlightenment debates over generation and then in 19th- and early 20th-century anatomy and embryology. Previously regarded as aberrations of nature, monstrosities were around 1800 made keys to understanding nature's laws. The French anatomists Etienne and Isidore Geoffroy Saint-Hilaire consolidated the science of teratology in the 1820s and 1830s, building classifications for collections in museums of anatomy and pathology. Evolutionists learned from monsters and around 1900 experimenters more systematically manipulated animal embryos to reveal mechanisms of development. This much is well known, especially for France and Germany, on whose national traditions historians have concentrated. But this literature has tended to overlook clinical engagement with teratology. The significant collections of human and animal malformations belonged not just to institutes of anatomy or pathology but also to professional corporations and hospitals. The majority of contributors to the field were practising clinicians: teratological dabblers who inundated professional journals and societies with reports of 'rare and interesting' cases. In Britain, the dearth of anatomical and embryological studies throws clinicians' numerical dominance into relief. They not only supplied the anatomists who did the most influential work in teratology, but also participated in the field with distinctive professional and disciplinary concerns.

Ballantyne's identity as an obstetrician profoundly shaped his teratology. "From time immemorial," he claimed in 1902, "the obstetrician has looked upon the diseased or monstrous foetus as peculiarly his field of study." Since the 18th century, male attendants of childbirth had certainly discussed monsters to

**Above:**

By 1900, preserved fetal malformations could be found in the pathological collections of most medical schools, including that of the Royal Free Hospital, London, 1913.

**Cover:**

'Ex ovo omnia'. Detail from frontispiece to William Harvey's *De generatione animalium* (1651).  
By permission of the Syndics of Cambridge University Library

demonstrate their scientific authority in matters of reproduction and distinguish themselves from midwives. But ‘obstetrics’ was still a relatively young field of dubious professional status even in the 1870s, when Ballantyne began his medical training in Edinburgh. Elsewhere, obstetricians still struggled for recognition, but at the University of Edinburgh, with the oldest midwifery chair in Britain, the discipline was unusually established. Obstetricians there were well placed to control the circulation of anatomical specimens and participated in the wider scientific community by cultivating identities as anatomical experts. In the 1880s and 1890s, the Edinburgh school produced influential work on the anatomy of the female pelvis and pregnant uterus.

Ballantyne participated in this enterprise, but distinguished himself from his colleagues by focusing on the fetus. From the early 1890s, he collected, dissected and classified rare congenital malformations.



His lectures and publications culminated in the leading English-language manual of teratology in 1904. Ballantyne justified this work in an internationally anatomist-dominated field by highlighting the obstetrician’s advantage, that only he could compare the health of the mother during pregnancy with that of her fetus or child. He claimed that the obstetrician’s familiarity with his patient, her family and her social circumstances enabled him to construct a pathological genealogy for any given case. While obstetricians had long dissected fetal anomalies, preserved them for anatomical museums and reported them in journals, Ballantyne insisted that the systematic collection of case histories by obstetricians would make teratology clinically relevant. By framing clinical histories as a crucial component of the investigation of fetal anomalies, and stressing the importance of the medical management of pregnancy, he promoted a new discipline: ‘antenatal pathology and hygiene’.

Positioned between obstetrics and teratology, Ballantyne initially struggled to find an audience for his project. He first attracted serious attention from the medical profession by appealing, in a 1901 article in the *British Medical Journal*, for the establishment of a “pre-maternity hospital”. Unlike existing maternity institutions, which generally turned away pre-parturient women, this would accept patients in any

stage of pregnancy diagnosed with complications or abnormal obstetric histories. In October 1901, the directors of the Edinburgh Royal Maternity Hospital set aside a bed, and later a ward, for the reception of “patients suffering from the diseases incident to pregnancy”. Traumatic experiences in past pregnancies, personal brushes with death during delivery, or slow and incomplete post-partum recoveries may have prompted women to seek medical attention, and to welcome the advice and reassurance provided by hospital staff. Many local practitioners came to view the pre-maternity ward as such women’s only hope of delivering a living child.

The novelty of the pre-maternity lay in Ballantyne’s suggestion that the expectant mother should be subject to clinical observation and management “on behalf of her unborn child”. He reasoned that the pre-maternity would enable obstetricians to undertake the “systematic and scientific investigation of the bodily functions in pregnancy”. This included the aetiology of congenital diseases, malformations and miscarriages in the clinic by, for instance, experimenting with therapeutic and dietary regimens and routinely examining stillbirths by post mortem. Obstetricians elsewhere adopted Ballantyne’s agenda by campaigning for clinical research in the pathology of pregnancy. Amand Routh, president of the Royal Society of Medicine’s Obstetric and Gynaecological Section, credited antenatal pathology and hygiene with inspiring a “new obstetric ideal”.

Linking his expertise in teratology with his experience of the pre-maternity clinic, Ballantyne developed an understanding of pregnancy that laid particular importance on environmental contexts. Against the dominant view that the mother’s placenta and womb protected antenatal life from toxins and injuries, Ballantyne proposed that the fetus “is not beyond the influences of her [the mother’s] environment, nay, her body is his immediate environment, and he is profoundly affected by it for good or evil, for health or disease”.

Ballantyne’s career-long involvement in Edinburgh’s evangelical churches and in temperance work in the Society for the Study of Inebriety and the National Council for Public Morals stimulated him to write tracts



**Above:**

Ballantyne used a collection of drawings and diagrams in his lectures on ‘antenatal life’. *Royal College of Physicians of Edinburgh*

**Right:**

Portrait of Ballantyne, late in life. By A Swan Watson.

against alcohol and syphilis as harmful to antenatal life. Around World War I, he joined a diverse coalition of intellectuals, social welfare campaigners, public health officials, medical practitioners, clerics and eugenicists who aimed to regenerate the nation's moral life by positive education. But Ballantyne criticised those eugenicists that he believed placed too great an emphasis on irreversible morbid heredity at the expense of medical and moral improvement. As early as 1901, he insisted that it was "better to try to turn the weeds into flowers rather than to suppress them".

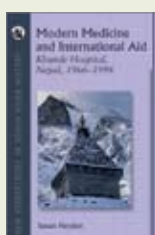
For Ballantyne, the solution to population decline was to place pregnant women under medical supervision, and to educate them in antenatal hygiene. In the 'New Liberalism' of Edwardian Britain, this reasoning held wide appeal. His suggestion that many 'postnatal' diseases could be traced to antenatal life helped to shape infant mortality as a social problem. A new generation of medical and political reformers challenged the *laissez-faire* ideology that had underpinned Victorian public health by insisting that social welfare would enable the individual to overcome his or her environment. These debates emphasised mothers' national duty as reproducers of race and Empire, but also stressed the medical scrutiny of maternal behaviour. The introduction of statutory antenatal care followed a political consensus that improving the welfare of both fetus and pregnant woman would improve the health of

the population. New audiences had been instrumental in transforming the hitherto esoteric practice of teratology into a wider public mission to advance the interests of 'antenatal life', and of the expectant mother and the obstetrician.

Ballantyne publicised pre-maternity work in the early 20th century by anticipating total medical control over pregnancy that prioritised the health and welfare of the fetus. It was only with the hospitalisation of childbirth and the introduction of new diagnostic technologies after World War II that obstetricians would claim to have fulfilled this promise. Fetal surveillance and the redefinition of all pregnancies as potentially pathological have since provoked intense debate over medicalisation, obstetric authority and the public meanings of the unborn. Yet important strands of the reproductive politics that underpinned these postwar practices and controversies date back to around 1900. From his work in teratology, Ballantyne promoted the view that fetuses were vulnerable to their environment and needed obstetricians as expert advocates of antenatal life. His career both helps us to understand the origins of these identities, and highlights clinicians' roles in shaping teratological knowledge.

Salim Al-Gailani is at the Department of History and Philosophy of Science, University of Cambridge; his PhD was funded by the Department's Wellcome Trust Enhancement Award (E ssa32@cam.ac.uk).

## New publication



*Modern Medicine and International Aid: Khunde Hospital, Nepal, 1966–1998* by Susan Heydon

In 1966 New Zealander Sir Edmund Hillary, 'hero' of Everest, built a small hospital for the celebrated Sherpas of Himalayan mountaineering. Throughout much of the world foreign aid and healthcare became deeply entwined during the second half of the 20th century. Despite all the money that was spent, and all the reports and literature about aid and development, however, remarkably little is known about the implementation of projects or why health programmes may not be as successful as planned.

Set in the rugged, remote and high-altitude environment near the world's highest mountain, this history of Khunde Hospital provides a detailed case study about both an ongoing encounter between Sherpas' beliefs and practices about sickness and their use of 'modern' medicine, and the implementation of an aid project that is situated against a background of changing ideas and practices in international aid.

Students of development studies, international health, medical history and anthropology will find this book not only engaging but rich in fieldwork data.

Susan Heydon is Lecturer in Social Pharmacy at the University of Otago. Between 1996 and 1998 she was a volunteer for the Himalayan Trust at Khunde Hospital. Her ongoing research interests focus on issues surrounding the implementation of health policies and programmes.

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# Generation to Reproduction: a Strategic Award for the University of Cambridge

## NICK HOPWOOD

A Wellcome Trust Strategic Award in the History of Medicine will allow a group of researchers at the University of Cambridge to take a concerted, cross-disciplinary approach to the history of generation and reproduction.

Reproduction has seen rapid innovation in recent decades and still raises challenging questions, but debate too often focuses on the short term. Building on a lively field of investigation, we aim to offer a systematic historical reassessment as a fresh basis for policy and public debate.



The new grant, for £785 000 for five years from 1 October 2009, will expand activities established in Cambridge over the last five years under a Wellcome Trust Enhancement Award to the Department of History and Philosophy of Science (HPS). We used this to develop the reproduction theme, initially for the period 1550 to the present. It funded doctoral studentships, to Salim Al-Gailani on teratology, obstetrics and antenatal care around 1900 (see pages 2–4) and Signe Nipper Nielsen on early modern representations of the fetus, as well as research leave, conferences, workshops and seminars, and an online exhibition on *Making Visible Embryos* (see page 15). This raised our profile and, just as importantly, enhanced local communication. In 2005/06 faculty and PhD students founded two research groups at the Centre for Research in the Arts, Social Sciences and Humanities: the Cambridge Interdisciplinary Reproduction Forum, which organises annual workshops, weekly reading groups and other events, and the Health and Welfare Research Group, which includes reproductive topics.

This has allowed us to extend our chronological range and bring in new approaches. Historians of medicine and biology in HPS (John Forrester, Nick Hopwood, Lauren Kassell and Jim Secord, with Eleanor Robson as collaborator) will work with colleagues in Classics (Rebecca Flemming), Physiology, Development and

Neuroscience (Martin Johnson), King's College (Peter Jones), Geography (Richard Smith) and History (Simon Szreter). The team combines expertise in every major period of Western history, in approaches from quantifying parish records to interviewing scientists, and in topics from ancient fertility rites to IVF.

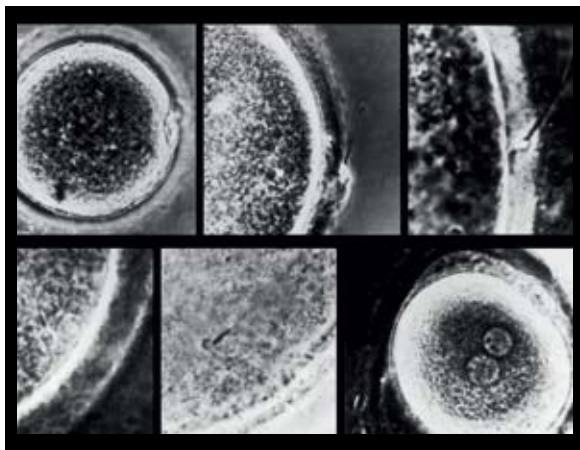
'Generation' and 'reproduction' are at the heart of medicine. They involve: theories of sex and gender; entities such as seeds, germs, embryos, monsters and clones; concerns about creation, evolution, degeneration and regeneration; investments in maternity, paternity and heredity; practices of fertility control, potency and childbirth; and health relations between citizen and state, individual and population. These crossroads for rich traffic to and from biology, the social sciences and the humanities have been of intense public and historical interest since the 1970s. Yet for all the excellent historical work, research tends to be dispersed among subdisciplines and periods. The major frameworks, not least by Michel Foucault, were produced by modern specialists looking back and are now showing their age. Central topics, such as the recent rise of the technologies of assisted reproduction, have hardly been studied. We need a comprehensive reinvestigation of the field.

'Generation to Reproduction' thematises gradual, long-term shifts and the transformations of the modern age. Within an all-encompassing process of 'generation', the human acquisition of a rational soul had been viewed as the crucial event. In the era of revolutions around 1800 this approach gave way to the more narrowly framed 'reproduction'. Reproduction became an object of scientific knowledge, a target of medical and agricultural intervention, and a project for pressure groups and states seeking to improve the quantity and quality of populations. Since World War II, scientific, social and ethical innovation has been dramatic. But the term 'generation' has not disappeared; it has rather acquired new meanings, from 'F1' to 'generation X'.

The group will work together on *Generation to Reproduction: Cultures of fertility and techniques of control from antiquity to the present*, a volume of specially commissioned 5000-word chapters suitable for advanced undergraduates. We will also organise annual conferences on such broad themes as 'Identity and citizenship', 'Communicating reproduction', 'Biopolitics and governmentality' and 'Gender, sexuality and generation'. We will do more focused work in four complementary research strands. Three range from antiquity to (early) modernity, while the last integrates diverse aspects of the 20th-century revolution. The strands organise teams to address major questions through research on two or three projects each, with joint events to promote interaction.

### Above:

'Ex ovo omnia'. Detail from frontispiece to William Harvey's *De generatione animalium* (1651). By permission of the Syndics of Cambridge University Library



Strand 1, 'Patients and practitioners', will study medical encounters with people seeking help with reproduction. We aim to construe the 'reproductive patient' more broadly than have studies concentrating on fertility control and childbirth. Projects will explore appeals to healing shrines to promote fertility and facilitate generation, astrological and related records of divination and consultation, and the relevant ways in which forces of 'regeneration' were made potent within magical, astrological, alchemical and natural historical traditions. This strand intersects, among other work, with Robson's projects on cuneiform texts from ancient Assyria and Babylonia, Flemming's research on fertility, medicine and the divine in the classical world and Kassell's casebooks project (see their articles in the following pages).

Historical research has made an important contribution to demonstrating the variability of human fertility and the social diversity of reproductive regimes. Strand 2, 'Reproducing generations: conception and survival', will consider how maternal, fetal, infant and childhood health have affected adult health and fertility, and the reproductive impact of sexual behaviour and venereal disease (see article by Smith and Szeleter). Smith is leading a project about the role of metropolitan centres as epidemiological drivers, comparing evidence from cities in the ancient world and early modern Europe, especially London. Szeleter is working on the reproductive revolution in practices and ideas in Britain between c.1860 and 1940, with a special focus on the effects of venereal disease on fertility and on sexual behaviour.

Generation and reproduction have been debated since antiquity, with considerable continuity in questions and huge changes in form. Strand 3, 'Representation and communication', will show how understandings of sex, development and evolution were produced, debated and used. The main challenge is to ground in basic practices of representation and communication a history that remains in large areas dominated by disembodied ideas (see article by Jones and Secord). Three projects will explore debates over seeds, sex and secrets, recast the history of evolutionary theory by looking from the perspective of reproduction and development and in

relation to changing forms of discussion, and survey the making of developmental series as the dominant representations of pregnancy today.

Finally, strand 4 is about 'Twentieth-century transformations' in technologies, experiences and regulation. How and with what effects did biomedical means of contraception and fertility, prenatal testing and childbirth become routine? We plan to focus as locally as possible, especially on Cambridge and California, while understanding reproductive science, technology and medicine unusually broadly, from animal breeding and obstetrics through embryology and genetics to psychoanalysis, from sex and sexual identity through pregnancy diagnosis to birth. This strand intersects with Johnson, Sarah Franklin and Hopwood's Trust-funded project on mammalian embryology and IVF in postwar Britain and initiates research by Forrester on the psychology of conception (see articles).

'Generation' and 'reproduction' are at the heart of medicine. ... These crossroads for rich traffic to and from biology, the social sciences and the humanities have been of intense public and historical interest since the 1970s. Yet for all the excellent historical work, research tends to be dispersed among subdisciplines and periods.

The Strategic Award will provide PhD studentships, research assistant and associate positions, research leave, and support for events and outreach, including a major exhibition on *The Book of Generation* at the University Library. We are delighted to have appointed Francis Neary, previously of the Sedgwick Museum of Earth Sciences, to the new post of events and outreach officer.

Without attempting to be comprehensive, the articles in the rest of this section give a flavour of the research we plan. We look forward to working with colleagues, nationally and internationally, and to seeing you at events in Cambridge. We welcome inquiries about postgraduate training, postdoctoral research and short-term visits. See [www.hps.cam.ac.uk/generation/](http://www.hps.cam.ac.uk/generation/) or contact [generate@hermes.cam.ac.uk](mailto:generate@hermes.cam.ac.uk).

Nick Hopwood is Senior Lecturer in the Department of History and Philosophy of Science, University of Cambridge, and leads the 'Generation to Reproduction' group ([E ndh12@cam.ac.uk](mailto:Endh12@cam.ac.uk)).

**Above:**

Human eggs in various stages of sperm penetration through to full fertilisation. From the 1969 experiments by Bavister, Edwards and Steptoe. *Courtesy of Dr Kay Elder, Bourn Hall Clinic*

# Meanings of birth in ancient Assyria and Babylonia

**ELEANOR ROBSON**

**“If an anomaly has 8 feet and 2 tails: the ruler will seize the kingship of the world. That archer – his name is Tamdanu – says as follows: ‘When a sow of mine gave birth, [the young] had 8 feet and 2 tails. I pickled it in salt and put it into the house.’”**

The Babylonian astrologer Nergal-etir wrote this brief report of a monstrous birth for his patron, the Assyrian king Esarhaddon, some time in the 670s BCE. Court protocol dictated that scholars couldn't simply pop into the palace for a chat with the king but had to approach him in writing first. We cannot know whether Esarhaddon called Nergal-etir in for an audience about this favourable omen, let alone whether he asked to see the pickled portent itself. But he clearly thought that the event was worthy of record. Nergal-etir's clay tablet was filed in the palace archive, where it remained until the city was destroyed in 612 BCE. And there it stayed for another 2500 years. It was finally unearthed from the ruins of Nineveh, on the banks of the Tigris in northern Iraq, and taken to the British Museum in the 1840s along with some 28 000 other cuneiform tablets from the archives and libraries of Assyria's great capital.

Nergal-etir and his Assyrian colleagues were certainly not the first people in the world to ponder and explain the mysteries and meanings of birth, but they are among the first whose writings and practices we can access. The Cambridge Strategic Award on ‘Generation to Reproduction’ presents an exciting opportunity to reassess this fascinating but difficult material within an unprecedentedly broad historical framework, in collaboration with existing Assyriological projects.

Nergal-etir's tablet alone cannot tell us very much about the ideas and activities surrounding conception, pregnancy and birth in seventh-century BCE Assyria. Fortunately, vast numbers of cuneiform tablets survive, many of them autograph originals excavated from meaningful archaeological contexts. Reports such as Nergal-etir's give us marvellously direct glimpses of scholarship in practice, while the contents of domestic and institutional libraries furnish the learned tradition on which this practice was based.

**Above:**

Nergal-etir's report, written in cuneiform on a small clay tablet measuring just 71 × 37 × 21 mm.

Photograph by Frans van Koppen; reproduced with the permission of the British Museum

But the sheer volume of imperishable yet impenetrable writing is both the historian's blessing and her curse. Cuneiform script is challengingly complex, while we still do not fully understand the technical vocabulary of the long-dead Akkadian language whose main dialects were Assyrian and its southern neighbour, Babylonian. Most frustratingly, scholars such as Nergal-etir often expressed themselves in ways that are difficult to comprehend so many centuries later, even when we can translate every word.

The way forward is through systematic publication and analysis of this vast mass of data. Over the past few years the Cuneiform Digital Library project ([cdl.museum.upenn.edu](http://cdl.museum.upenn.edu)), led by Professor Steve Tinney at the University of Pennsylvania, has been developing tools for the online edition of cuneiform texts in several different ancient languages. I am involved with the creation of two substantial corpora – both still in progress – that are enabling us to develop new models for understanding the sociopolitical context of Assyro-Babylonian ‘science’.

State Archives of Assyria online ([cdl.museum.upenn.edu/saa](http://cdl.museum.upenn.edu/saa)) is a collaboration with Dr Karen Radner of University College London, Professor Simo Parpola of the University of Helsinki and many other colleagues worldwide. Among the 4000 or so documents now online are some 1500 letters, reports and divinatory queries written by the king's scholarly advisers in Nineveh, which give us unprecedented access to Assyrian scholarly practice. Nergal-etir's report is among them, with other reports of ominous births and a dozen or so letters concerning the wellbeing of royal babies.

We are assembling the other side of the picture, the learned tradition, through the Arts and Humanities Research Council-funded research project ‘The Geography of Knowledge in Assyria and Babylonia’ ([cdl.museum.upenn.edu/gkab](http://cdl.museum.upenn.edu/gkab)) here in Cambridge. The great library at Nineveh, about 20 000 tablets strong, is still too big to handle. Instead we are studying two smaller Assyrian libraries, also from the seventh century BCE, and following the tradition past the end of native rule into the Persian and Greek periods. For this purpose we have chosen libraries from the Babylonian city of Uruk between the fifth and second centuries BCE. Some 400 texts are now online, edited by Marie Besnier, Philippe Clancier, Graham Cunningham, Frances Reynolds and me. They include therapeutic and ritual interventions for women in labour, fertility incantations, systematic collections of omens from anomalous births, and some of the world's first birth horoscopes.

A key problem for us is to chart and explain the development from Assyrian-style omens to astrological divination and zodiacal medicine in the mid-first millennium BCE. Collaborations with the ‘Generation to Reproduction’ award under the theme of ‘divination and consultation’ will be enormously beneficial here, culminating a workshop and associated events in 2012 on the history of birth horoscopes worldwide.

**Eleanor Robson** is Reader in Ancient Middle Eastern Science in the Department of History and Philosophy of Science, University of Cambridge. She runs the AHRC-funded research project on the Geography of Knowledge in Assyria and Babylonia and is a co-director of the Cuneiform Digital Library ([E er264@cam.ac.uk](mailto:Er264@cam.ac.uk)).



# Fertility, medicine and the divine in the classical world

## REBECCA FLEMMING

Compared with birth control and abortion, rather little attention has been paid to the generally more pressing concern of promoting fertility in the classical world. The production of heirs was an almost universal goal in ancient Greece and Rome, so failures to conceive, bring pregnancies to term or bear healthy children were serious problems for rich and poor alike.

People faced with such challenges could appeal to the divine. They approached a range of deities, from Mater Matuta, who had a special interest in childbearing and is often represented as a mother, through various healing gods such as Asclepius, to those with much broader powers, for example Zeus Hypsistos. The innumerable surviving votive offerings, as well as more limited numbers of inscriptions and sculptures from many sacred sites, testify to the variety of modes of address. Mythical stories such as the ill-fated consultation of the Oracle of Apollo at Delphi by Laius and Jocasta, soon-to-be parents of Oedipus, about their childlessness add to the variety and further underline the significance of the phenomenon.

### Below:

Italian votive terracotta: swaddled child, fourth to first century BCE.



Much of this evidence is ambiguous, however, and as part of the research on patients and practitioners under the Cambridge Strategic Award, I am exploring how best to assess it. Do the thousands of (usually terracotta) votive uteri found in central Italian sanctuaries of the Hellenistic Period (fourth to first centuries BCE) speak to concerns about reproduction, or about diseases of the womb or, given its centrality to certain ancient conceptualisations of female health, to something more holistic? Is it possible, or meaningful, to try to disentangle these themes? Similarly, were the equally numerous swaddled infants in terracotta offered on behalf of the health of children already born or in anticipation of those to come? Even the records or proclamations of cures displayed in the great sanctuary of Asclepius at Epidauros in the Peloponnese during the fourth century BCE specify the issue that brought named women there simply as 'about children'. All the supplicants were successful, of course, with one even eventually bearing five offspring. Presumably the appeal to the god was made, if not as a last resort, then only after years of childlessness, or at least after fertility had become a serious concern, but more details would help. For there are both historical and current societies in which, for example, visiting a local sacred site is a more standard, ritualised first move in starting a family.

This evidence tends to emphasise the sense in which fertility was considered essentially women's business,

despite medical writers' acknowledgement (at least in the Roman imperial period) that failure to conceive might be caused by either partner, or indeed a mismatch between the two. That raises a further set of questions about the relationship between these activities and other forms of contemporary medical and religious practice, together with the conceptual commitments on which these were based.

In general in the classical world, the relations between divine and human healing were fairly close, and certainly amicable, so these options are by no means mutually exclusive. It is worth asking, however, whether the divine was not more favoured with regard to fertility and childbearing than other issues. Ancient physicians – and presumably midwives, who took the main responsibility for female health, but have left little direct evidence of their work – were certainly interested in what was obviously a crucial subject. They made plenty of suggestions about how to remedy childlessness – how to promote conception, healthy pregnancy and successful birth – in treatises from the Hippocratic compilation *On Barren Women* onwards. But fertility was considered a question of general fortune as much as a medical matter, and so something definitely worth approaching the gods about. Which divinities were approached (healing or otherwise, maternal or not) and in what ways (with a general request or with a votive uterus, for example) may signal different understandings.

The importance of trying to unpick these nuances of meaning, the wider set of relationships in which these activities operate, becomes particularly clear in the context of the long-term approach taken in the Cambridge Strategic Award. Appealing to the divine for reproductive assistance is hardly unique to classical antiquity. Banquets might be offered for a fertile marriage in Assyrian temples, for example, and votive infants (unswaddled and usually in wax) can be found in various churches around the Mediterranean today. The overall assemblages into which these practices fit, however – the conceptual commitments and social organisation involved – are not the same.

Such comparisons are mutually illuminating, helping to pick out both what is specific to particular historical societies in relations between human fertility and the divine, and what is more common property, and to bring the various factors that might determine that relationship more clearly into view. Generation in the classical world, the ways in which it was understood and the practices surrounding it, is thus most fully and productively studied within this broader thematic context.

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# The Casebooks Project: Simon Forman and Richard Napier's medical records, 1596–1634

## LAUREN KASSELL

What is my disease? Am I pregnant? Will I die? These are the questions that thousands of people asked Simon Forman and Richard Napier, two of the most popular astrologers in early modern England. Their casebooks are preserved in dozens of large, brass-clasped manuscript volumes in Oxford's Bodleian Library.

These record c.50 000 consultations from 1596 to 1634. No other source contains so much information about the medical experiences of ordinary people in early modern Europe. A major part of the strand of the Cambridge Strategic Award on patient–practitioner encounters, the casebooks document how sexual activity and generative functions contributed to understandings of health and disease. They also reveal the norms governing the astrologers' and their clients' discussions about illness, sex and death.

Forman and Napier's casebooks are legendary among historians of medicine as a repository of direct encounters between practitioners and patients. They are also notoriously difficult to use, because the handwriting is antiquated and sloppy, and because they are written in the language of astrology. A L Rowse sifted Forman's records for intimate details about Elizabethan notables, and chronicled Forman's busy social and sexual life. Michael Macdonald's landmark work on madness in early modern England is based on Napier's records. Inspired by Macdonald, I began studying Forman's casebooks as a Master's student in Oxford; Forman and his manuscripts then became the subject of my DPhil. I compiled a database of the first two years of his medical records, which allowed me to provide a panoramic survey of Forman's patients, follow the cases of particular people and identify social clusters.

This material raised questions about what motivated people to consult the astrologer-physician, what services he provided, and how health and disease were understood in Elizabethan England. It did not provide the answers to these questions. There were two possible ways forward. One was to extend the database to create a full profile, through Forman's patients, of the geography of healing in Elizabethan London. Instead, I read the casebooks alongside his writings about astrology and medicine and found evidence that gender, astrology and

authority were intertwined in these consultations. Forman, I argued, used the language of the stars to persuade his patients to invest him with the power to heal their diseases. This was especially important in treating the diseases of women. A woman's health, according to Forman, was tied to her reproductive function, and women, he argued, were duplicitous about their sexual activities. Through the stars, the astrologer could see through this duplicity, discern the true cause of disease, and thereby win the trust necessary to effect a cure.

My work on Forman's casebooks features in my 2005 book, which recovers the daily pursuit of science, medicine and magic in Elizabeth and Jacobean London through his papers on subjects ranging from autobiographies to alchemical dictionaries. The need for a full analysis of his and Napier's casebooks remains. It is also time for historians of medicine to reassess what we can learn from patient-centred studies. These are the tasks of the Casebooks Project. It will use Forman and Napier's records as a centrepiece for studying how the medical subject has been created and represented.

The Project's first goal is to produce an electronic edition of their casebooks, 1596–1634. The edition will enable scholars to view transcriptions of the manuscripts in the original or normalised English and to search for associated cases. It will be mounted on a website containing a scholarly introduction plus everything one needs to know about the history of these records and how to use them for research, teaching and as a model for creating other digital resources. Secondly, focusing on these records, the Project will bring established and emerging scholars together at a pair of workshops to reflect on the current state of work on medical records and the patient in history. This will result in an edited volume of essays.

A pilot study for the Casebooks Project was supported by a small grant from the Wellcome Trust in 2008–09. This employed Peter Forshaw and Rob Ralley as Research Associates, and Mike Hawkins provided detailed technical advice. We produced a database of Forman's extant casebooks, freely accessible on [www.hps.cam.ac.uk/casebooks](http://www.hps.cam.ac.uk/casebooks). This is a massive spreadsheet that can be searched for particular people (such as Emilia Lanier, Shakespeare's Dark Lady) or groups (all clients from Southwark, all women aged 50–60, all people with toothache). We are now seeking funding for the full project.

**Lauren Kassel** is Senior Lecturer in the Department of History and Philosophy of Science, University of Cambridge (E [ltk21@cam.ac.uk](mailto:ltk21@cam.ac.uk)).



**Above:** A man telling a lady's horoscope. Colour stipple engraving by J P Simon after J R Smith. Late 18th or early 19th century.

# Reproducing generations

## RICHARD SMITH AND SIMON SZRETER

Biological, anthropological and historical research has demonstrated the variability of human fertility and the social diversity of reproductive regimes. This strand of the Cambridge Strategic Award will evaluate the effects on reproductive rates of the health of conception and the fetus *in utero*, as well as that of infants and young children.

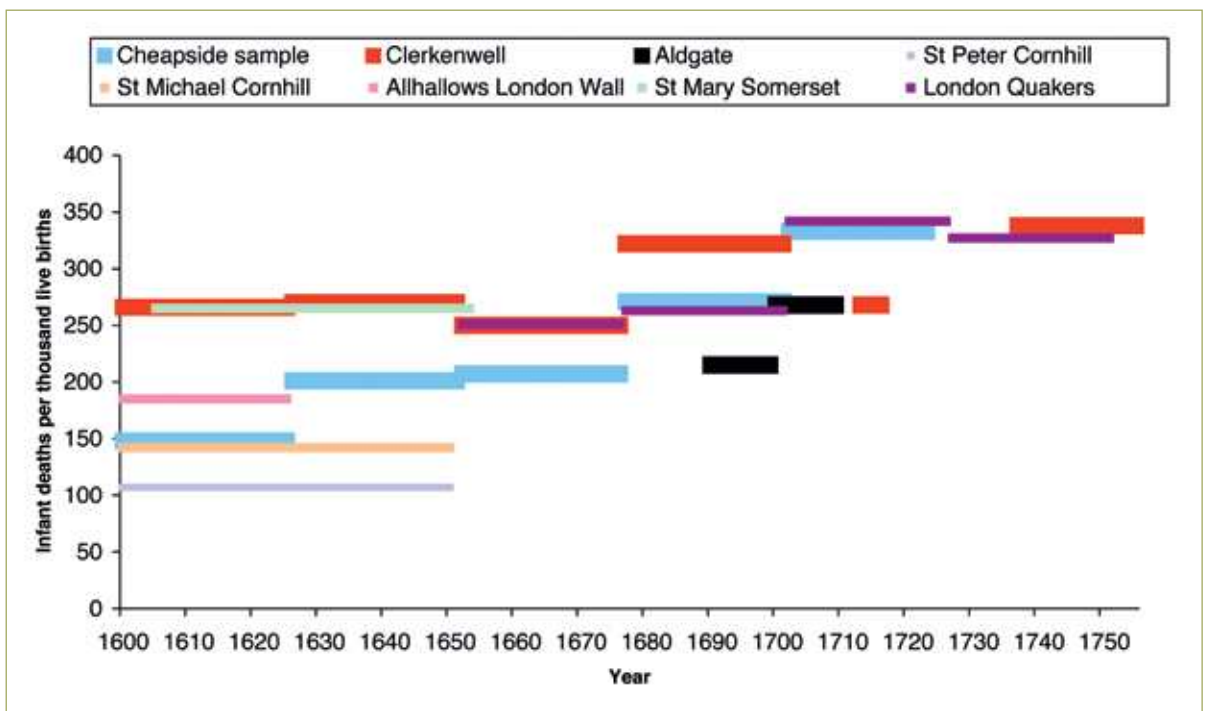
### Disease and reproductive success in metropolitan centres

English infant mortality rose significantly in the century after 1650 and the limited evidence currently available (see figure, below) suggests that infant survival chances worsened over the same period far more severely in London than the national average, in wealthy and poor areas of the city and the suburbs. This suggests that exposure to infections, the most likely cause, was much the same across the metropolitan area and not fundamentally a function of income or social status. London was so big by 1700 within a national population of about 5 million that it served both to increase aggregate mortality nationally and to stimulate the circulation of diseases within and away from it, thereby adversely affecting the life chances of infants and very young children in the hinterlands.

While mortality among the newborn and very young children increased well into the first half of the 18th century, very provisional findings from recent research in the Cambridge Group for the History of Population suggest that adults in all social-status groups were already beginning to exhibit significant improvements in life chances from around 1700. Yet maternal mortality appears to have risen in the second half of the 17th

century. The childbed experience was especially hazardous in London and among English peeresses, many of whom were spending increasing periods of time in the capital at the beginning of the 18th century when infant life was especially precarious. The simultaneous deterioration of infant and maternal life chances is entirely consistent with the fact that women in their third trimester of pregnancy and newly delivered are several times more likely than others of the same age to become infected by and die of infectious diseases.

In this project we are more fully investigating the role played by London as a metropolitan centre of unprecedented scale. This is a vital context within which we hope to make sense of another striking development that becomes increasingly apparent in the later 18th century. After c.1750 the infant mortality rate in London fell sharply from the appalling heights of c.400 per 1000, so that by the close of the Napoleonic Wars it was down to 150 per 1000 and then barely higher than the national average. One possible contributor is a fall in neonatal and first-month infant mortality as well as a significant fall in mortality after the age of weaning, which paralleled declines in maternal mortality. Was there a link between improved health and immunity to infectious disease among those in the older age groups who had survived infancy in the 18th century and in what ways could their enhanced longevity in turn have increased the survival chances of their offspring? The project is essentially concerned to establish whether these transformations in mortality among mothers bearing upon their net reproductive success, both within the womb and in the early months of their babies' lives, offer a means of understanding how these important mortality transitions came about. We are also interested in how developments in London and its



hinterlands compared with those in and around metropolitan centres elsewhere in early modern Europe and in the great cities of the ancient world.

#### **Venereal disease and fertility, c.1860–1940**

The second project in this strand will explore a distinct aspect of disease and health that also related closely to the demography of generation and reproduction, namely the incidence and consequences of venereal diseases in Britain during the period c.1860–1940, when the nation's fertility declined dramatically. While it is clear that most of this fall was due to the new departure of increasingly extensive voluntary control over conceptions within marriage, no one has previously attempted to investigate or evaluate what part of the fertility reductions in different sections of the population might have been due to involuntary sterility caused by venereal diseases.

This project will first compile an annotated bibliography of the contemporary medical, scientific and official publications that addressed this issue. In order to derive a best estimate of the contribution of venereal diseases to the reduction in fertility, we will have to estimate the changing incidence of gonorrhoea especially, because this was a direct cause of female

sterility in a proportion of affected cases. We expect, however, that we will find more plentiful historical evidence for the higher-profile and much-feared disease of syphilis, with its more obvious symptoms. Estimating the fertility effects of venereal diseases is undoubtedly complex and difficult, but for a full understanding of the reproductive revolution it is important.

We envisage that this research could also spawn a related project studying ways in which changing contemporary medical understandings of the health and reproductive consequences of venereal diseases may have influenced lay understandings and how these may in turn have modified behaviour in relation to marriage or sexual intercourse.

In researching all aspects of this strand we will use the 'History and Policy' network to draw attention to the policy implications for contemporary developing and poorer societies of our conclusions about links between maternal health and infant and child survival chances.

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## Communicating generation

### **PETER JONES AND JIM SECORD**

**Historians of all periods have begun to attend to the physical forms of the texts they study and the ways in which medical knowledge was communicated. With notable exceptions, however, the focus has been on production rather than use, and on print rather than the full range of media. The field of the 'history of the book' developed around the histories of printing, publishing and bibliography. Only recently has it broken free and looked more generally at relations to other forms of communication.**

The history of generation and reproduction offers an ideal opportunity to consider these issues over the long term, from the ancient world to the present. This is our focus as part of the 'Representation and communication' strand of the Cambridge Strategic Award. The two of us are starting in the late 14th century.

How, for example, was the late medieval advent of printed medical books shaped by earlier innovations in oral communication, handwriting and visual imagery? The coming of print used to be a straightforward story of the triumph of a new technology. This assumed that the printed book simply replaced the manuscript, and that more or less at the same time oral culture was pushed into the background by

written communications. Yet from the third quarter of the 14th century onwards – a century before the coming of print – we can already see an explosion of useful information taking place. Knowledge of practical importance to laypeople, and pre-eminently information about sex and reproduction, began to circulate in handwritten form outside academic or institutional circles. It could take the form of visual diagrams, for instance of the reproductive organs or the fetus in the womb, as well as handwritten texts.

This late medieval information explosion can be measured in its impact by the rapidly increasing production of manuscripts of this practical type, and these also reveal a dynamic interaction between oral and written transmission. Oral charms to ensure conception, for example, were written down in manuscript form, but written recipes could also give rise to oral circulation. Some writings were fetishised and turned into amulets, as with those tied to the thigh of a woman in childbirth. The coming of print did not render these developments redundant but enhanced their effect by making texts and images more easily reproducible.

How these developments played out in the late medieval and early modern periods will be the focus of research that seeks to relate the different communication media to each other. Printed books, manuscripts and evidence for oral culture that bear on generation and reproduction will be

studied through their interactions rather than separately. Who used these media and what kinds of authority or influence were at stake?

The relation between orality and print is especially significant in considering the use of manuals, which have long been a pervasive feature of the literature on reproduction, from *Aristotle's Masterpiece* to gynaecology textbooks and *The Joy of Sex*. A major exhibition at Cambridge University Library will feature a wide range of materials connecting the discussion of generation over the centuries among many different social groups.

Another focus of our work will be to show how debates about materialism and transmutation – particularly in relation to generation and reproduction – can be reconstructed through an understanding of different forms of communication. This approach has been employed to great effect for specific episodes such as the philosophical discussions in the enlightened salons of Paris, but has rarely been used to understand changes over several centuries. Our enquiry will begin with the European scholarly rediscovery of Lucretius in the 15th century and end with modern discussions of evolutionary biology and genomics in laboratories, on television and on the internet. The aim will be to offer long-term perspectives on issues that have typically been discussed in terms of the history of ideas.

In studying the making of new knowledge about generation and reproduction, it is often assumed that by the beginning of the 19th century print had achieved complete pre-eminence. But that is far from so, as shown by the Cambridge-based project (supported by the Wellcome Trust from 1996 to 2006) to edit all the letters to and from Charles Darwin. For Darwin and his contemporaries, correspondence offered opportunities for announcing new findings, debating interpretations and conveying information. Just as different media continued to play important roles after the advent of printing, so too did they coexist during the next great transformation of communication during the industrial revolution.

The same is self-evidently true today. It is a commonplace that we live in an era in which communication is changing rapidly, but it is also clear that new technologies coexist in fascinating and complex ways with the old. Print is no longer seen as revolutionary, but – as this newsletter itself illustrates – it continues to play a vital role.

**Peter Jones** is the Librarian of King's College, Cambridge (E pmj10@cam.ac.uk). **Jim Secord** is a professor in the Department of History and Philosophy of Science and Director of the Darwin Correspondence Project (E jas1010@cam.ac.uk).

## Mammalian embryology and assisted reproduction in postwar Britain

**MARTIN JOHNSON, SARAH FRANKLIN AND NICK HOPWOOD**

The birth of Louise Brown, the first 'test-tube baby', in Oldham in 1978 is among the most influential and iconic events of postwar medical science, but has yet to attract sustained historical attention. Since 2008, we have been using a Wellcome Trust small project grant to begin to research and write a history of the science and politics that led to this achievement and from it to the practice of assisted conception under the Human Fertilisation and Embryology (HFE) Act (1990).

The success of *in vitro* fertilisation (IVF), together with other innovations in mammalian embryology, genetics and cell culture, has opened the door to new technical possibilities, including preimplantation genetic diagnosis (PGD), stem cell research and potentially cloning by somatic cell nuclear transfer, the procedure responsible for that other iconic birth, of Dolly the sheep in 1996. Largely made in Britain, these techniques were products of a research culture at the intersection of animal breeding, academic biology and human and veterinary medicine that concentrated on mammalian embryos in the decades after World War II. Activity was



especially vigorous and productive in the UK, as part of an emerging international and interdisciplinary network, and a distinctive regulatory regime was also established here. So our research seeks to show how

techniques were produced in, and in the traffic between, leading centres in the UK and elsewhere. While Edinburgh, London, Bangor and later Oxford were all important, Cambridge played a special role. The distinctive feature, we believe, was the potential for interaction among a critical mass of researchers with different disciplinary training in institutions with distinct missions. These include the Physiological Laboratory, the Department of Agriculture with the large-animal research station later taken over by the Agricultural Research Council (ARC), the Anatomy School, the Departments of Biochemistry and Genetics, the Strangeways Laboratory, the Vet School, the ARC Institute at Babraham, and the Artificial Insemination Centre.

Yet the road to a healthy live birth from human IVF was far from easy, because methods could not simply be transferred from rabbits, mice or cattle. Cambridge physiologist Robert Edwards and Oldham gynaecologist Patrick Steptoe faced technical, institutional and political obstacles. They had to determine the appropriate culture medium to support the successful fertilisation and development of human eggs *in vitro*, organise work between a university laboratory and an NHS hospital, and establish public support for socially challenging research. By the 1960s, population control and contraceptives, donor insemination and abortion were already highly contested subjects of intense public debate. The possibility of human IVF was similarly controversial, and the Medical Research Council (MRC) declined to support it on ethical and safety grounds. Before Brown was born, many reproductive scientists saw alleviating infertility as a much lower priority than population control, doubted that IVF had really been achieved, and feared fetal abnormalities.

Our research over the last two years has followed the twin tracks of interviewing participants and collecting materials before they are lost, and beginning to address key historical questions. We have so far interviewed 25 scientists and clinicians, civil servants and politicians involved in the research and its regulation. We are working with the British Library to deposit audio files

and transcripts and have also begun to collect personal archives from our interviewees. The British Library has now catalogued the first of these, the papers of Anne McLaren; the archives of the lobbying organisations PROGRESS and PAGIGS (the Professional Advisory Group for Infertility and Genetic Services) have been deposited at the LSE.

Our most promising preliminary research questions concern: the constitution of mammals as model systems in developmental biology; techniques, claims and changing community standards, notably for the achievement of human amniocentesis, PGD and IVF; funding patterns, priorities and policies; the significance of the high media profile of the research; the Warnock Committee report and the Powell Bill of 1984/85; and the framing of the HFE Bill and Act in 1990. We are currently preparing a first article about the MRC's decisions on human conception research.

Our social history will benefit from an unusual combination of disciplinary expertise. Martin Johnson, a developmental biologist and former student of Edwards, served on the Human Fertilisation and Embryology Authority and has published widely in reproductive science and ethics, regulation and policy. Sarah Franklin works in cultural anthropology and science studies and has conducted ethnographic research on IVF, stem cells, PGD and cloning. Nick Hopwood is a historian of embryology with special interests in the visual communication of medical science. This mix of skills is appropriate to a scientifically, socially and historically resonant and complex field. As we expand the work, we would be delighted to hear from people engaged in related research and/or interested in joining our project.

**Martin Johnson** is Professor of Reproductive Sciences in the Department of Physiology, Development and Neuroscience, University of Cambridge (E mhj21@cam.ac.uk).

**Sarah Franklin** is Professor in Sociology and Associate Director of the BIOS Centre at LSE (E S.Franklin@lse.ac.uk).

**Nick Hopwood** is Senior Lecturer in the Department of History and Philosophy of Science, University of Cambridge (E ndh12@cam.ac.uk).

**Left:**

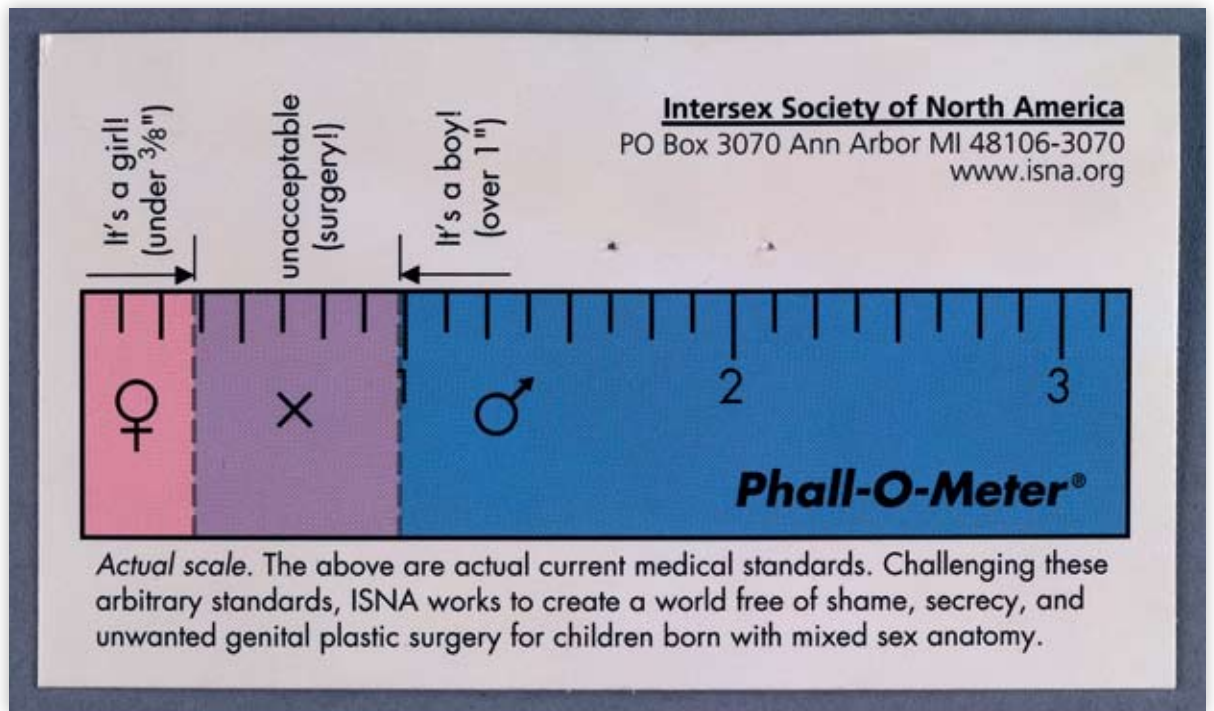
Human embryo culture chamber used by Edwards. It is a modified standard laboratory desiccator that was filled with the appropriate gas mixture (5 per cent CO<sub>2</sub> in air) for maintaining the acid–base balance of the culture medium, then sealed and placed inside a 37°C incubator. Thanks to Bourne Hall Clinic for allowing us to photograph.

## The psychology of the sexual–reproductive–gender system

### JOHN FORRESTER

Building on research on the history of psychoanalysis and the human sciences in the early-to-mid-20th century, the Cambridge Strategic Award on ‘Generation to Reproduction’ provides the ideal context for a research project on the psychology of the sexual–reproductive–gender system.

In the context of a widespread revision of sexual roles in family, society and economy, the early 20th-century distinction between sex pleasure and human reproduction was supplemented by a new distinction between biological ‘sex’ and social ‘gender’. A working overview would thus distinguish the ‘pleasure system’, the ‘gender identity system’ and the ‘reproductive system’ as competing and interacting fields of research that emerged progressively in the course of the 20th



century. In its third quarter, psychological, physiological and sociological approaches to both 'gender' and 'sex' competed. In the 1950s, psychological approaches, often inspired by psychoanalytic ideas, were prominent, if not dominant, in treating problems associated with sexual pleasure ('impotence' and 'frigidity'), with the complaints of patients who felt locked inside the wrongly sexed body and with the couples who wished to have children but whose marriages were 'infertile'.

New techniques in each of these fields emerged between 1950 and 1975: research into the physiology of sex (Masters and Johnson) linked with sex therapy, with a successful second transformation of the field and its closely associated market in the 1990s, effected by pharmacological agents (Viagra and others); gender reassignment surgery complemented by redeployment and new targeting of the hormonal therapies that became widespread from the 1950s on; the emergence of embryological and hormonal techniques for the treatment of infertility (IVF etc.).

One account of these changes would stress a combination of the inexorable logic of technological progress with the overwhelming force of the medical market. If it is technically feasible to build a good-enough working vagina, if it is technically feasible to produce a good-enough erect penis on demand, if it is technically feasible to fertilise eggs outside the female body, then these techniques will be developed, they will be released on to the prosthetic organ market alongside other miracles such as laser cataract surgery and Botox, and will sink or swim. Swum they have. However, historians have grown accustomed to being sceptical of such narratives, since they so obviously omit the messy local struggles in which experimental techniques become stabilised, accepted and implementable despite their often initially poor success

rates, their poor showing (under contemporary standards) when compared with now-forgotten alternatives, and their often scandalous character from ethical or even socio-political points of view.

The alternative to these new reproductive and sexual technologies was, in the mid-20th century, often psychological. The demise of the psychological answer in these three domains – pleasure, identity and reproduction – is a striking transformation of late 20th-century culture. It was no longer scientific or even in good taste to reply to the questions: 'Why can't I have babies?' and 'Why am I unable to gain sexual satisfaction?' with answers invoking psychological categories. In the third domain, that of 'gender', the question of 'What am I, male or female?' became highly contested, not least because the introduction of a quasi-psychobiological 'gender identity' (Robert Stoller) coincided with the introduction of 'gender' as a militantly non-psychological and non-biological category for analysing the organisation of society, principally by feminist academics with a historical, sociological and cultural orientation. 'Identity', often closely allied with the crystallisation of a group identifying a biopolitical or anti-biopolitical agenda – feminists, gays, transsexuals, ethnic groups – repudiated the psychological as the most conservative of opposing discourses.

The research I plan on the history of psychological approaches to the sexual-reproductive-gender system will focus on the period following World War II, always alert to the unexpected crossovers between pleasure, reproduction and identity. In the development of the 'gender system' and the introduction into psychiatry of gender identity disorders, the work of Stoller was significant and influential. The project will also investigate the history of psychological technologies of

**Above:**  
A 'Phall-O-Meter'  
produced by the  
Intersex Society of  
North America.

assisted conception, being always aware that, even if, by the end of the century, it became ‘unscientific’ and almost ‘unpublishable’ to consider whether ‘psychology’ had any relation to infertility, there is a rich seam of anecdotal knowledge and folk fables concerning the life stories associated with conception – from the plethora of stories of how long-infertile couples will conceive once they have adopted to the ‘fact-is-stranger-than-fiction’ case histories of miraculous conceptions circulating among

psychotherapeutic professionals. A conference in 2012 resulting in an edited volume will bring together philosophical and historical perspectives on all three systems under the title ‘Making Love, Making Gender, Making Babies in the 1960s and 1970s: An ethical and historical comparison’.

**John Forrester** is Professor of History and Philosophy of the Sciences, University of Cambridge (E jpf11@cam.ac.uk).

## Making Visible Embryos: an online exhibition



### TATJANA BUKLIJAS AND NICK HOPWOOD

Images of human embryos are everywhere today: in newspapers, clinics, classrooms, laboratories, baby albums and on the internet. Debates about abortion, evolution, assisted conception and stem cells have made these representations controversial, but they are also routine. We tend to take them for granted. Yet 250 years ago human development was nowhere to be seen.

The online exhibition *Making Visible Embryos* ([www.hps.cam.ac.uk/visibleembryos](http://www.hps.cam.ac.uk/visibleembryos)) examines how embryo images were produced and made to represent some of the most potent biomedical objects and subjects of our time. The Cambridge Department of History and Philosophy of Science produced the website as the major public engagement activity of the Wellcome Trust Enhancement Award through which we developed the theme ‘Generation to Reproduction’.

Arranged roughly chronologically, the exhibit spans from the late Middle Ages to the present, but concentrates on the modern era. It sketches the diversity of representations of the ‘unborn’ before developing embryos were first drawn at the end of the 18th century. Several sections recover the fundamental and relatively little-known work of producing standard developmental series, from Samuel Thomas Soemmerring’s plates of 1799 to the Carnegie stages and ultrasound norms of the mid-20th century, while attention is also paid to the changing public uses of the images, notably in campaigns over abortion.

The exhibition contextualises such famous and notorious icons as the German Darwinist Ernst Haeckel’s allegedly forged illustrations and the Swedish photographer Lennart Nilsson’s ‘drama of life before birth’ on a 1965 cover of *Life* magazine. It also interprets over 120 other drawings, engravings, woodcuts, paintings, wax models, X-rays and ultrasound scans. By depicting imaging technologies and people engaged in image production, it emphasises the work of making visible embryos.

The site is intended to be widely accessible, and has featured, for example, in *Nature* and on *Jezebel.com* (“Celebrity, sex, fashion for women. Without airbrushing”). Because text and pictures are based on a good deal of primary research as well as synthesis, it should also more specifically serve students, teachers and researchers in history of medicine. An extensive list of resources allows users to check claims and explore topics further.

Tatjana Buklijas is now Research Fellow at the Liggins Institute, Auckland, New Zealand. Nick Hopwood is Senior Lecturer in the Department of History and Philosophy of Science, University of Cambridge. Exhibition contact: [hps-embryo@lists.cam.ac.uk](mailto:hps-embryo@lists.cam.ac.uk).

#### Above:

A magnetic resonance image of a stage 20 (~50 days) Carnegie embryo.  
Bradley Smith,  
University of Michigan  
at Ann Arbor

#### Right:

The Bogenberg Madonna, with the Christ Child in her belly, exemplifies one of the most popular representations of pregnancy in medieval and early modern art. Early 18th century, oil on canvas. *Diocesan Museum, St Pölten, Austria*





## Retreat from empire and the mentally ill: European ‘madness’ in late colonial Kenya

**WILL JACKSON**

This research took off from my doctoral study of marginalised Europeans in colonial Kenya (1895–1963), funded by a University of Leeds Research Scholarship with additional funding assistance from the British Institute in Eastern Africa and the Institute for Historical Research.

Kenya was reputedly the most aristocratic of Britain’s imperial possessions and enjoyed a salubrious international reputation. It is a reputation attested to not only by its reworking in the postcolonial period through the popular media of book, film and safari tourism but also by the fact that, unlike the historical literature on other European settler colonies, in the case of Kenya very little has been written on the presence of colonials suffering from poverty, ill-health, stigma or exclusion.

In Kenya, ‘poor whites’ were subject to various forms of social control: institutional incarceration and deportation from the colony chief among them. Many were treated at the Mathari Mental Hospital and study of their case files raises questions concerning whether psychiatric confinement presented yet another form of a

uniquely colonial social control regime or whether, on the contrary, existence on the margins of a colonial settler society induced uniquely colonial forms of mental distress.

My research explores these questions through analysis of over 250 case files pertaining to patients admitted to Mathari between 1945 and 1963 as well as government archival files relating to the treatment of European mental patients in Kenya throughout the colonial period. This analysis is embedded within a discourse analysis of representations of ‘Africa’, ‘Kenya Colony’ and its subjective experience by colonial Europeans. During the final colonial phase, Kenya was advertised to prospective settlers as a haven from the tumult of war and decolonisation elsewhere. Immigration into Kenya increased accordingly and the European population doubled during the 15 years after 1945. Utilising the case files of those deemed to be in some way mentally ill not only provides insights into the practice of an under-explored aspect of colonial psychiatry but also opens up new and challenging opportunities to rethink both the idiosyncratic, subjective experience of empire and the figure of the colonising self at the point of demise.

**Will Jackson** is at the School of History, University of Leeds.

## Women medical students at Irish universities, c.1872–1922

**LAURA KELLY**

Women were first admitted to Irish universities to study medicine in the late 1880s, following the decision of the King and Queen’s College of Physicians in Dublin to become the first institution in the UK to take advantage of the Enabling Act of 1876, which allowed women to take its medical licence examinations.

Early female licentiates from the King and Queen’s College were predominantly British women who had trained abroad and came to the College to gain their qualification, as a result of the fact that most British medical institutions did not open their doors to women until years later. In spite of Ireland’s long history of female medical qualification, very little research has been conducted on the history of women in medicine in the country in the late 19th and early 20th centuries.

My project aims to study the history of the first women to train at Irish universities through the examination of the social and geographic backgrounds, experiences and subsequent careers of women medical students in the period, as well as looking at attitudes towards women in medicine more generally in Ireland and how these differed from attitudes in Britain. Those who argued against the medical education of women in Britain in this period believed that women’s physical, moral and emotional natures made them unfit to be doctors, while those arguing in favour insisted that there was a genuine demand for women doctors and that women’s very

**Right:**

Midwifery students at the Rotunda Hospital, Dublin in the 1920s. From *Octavia Wilberforce: The autobiography of a pioneer woman doctor*, edited by Pat Jalland (Cassell, 1989).



natures made them eminently suitable for careers as physicians. Similar arguments were used in the Irish debate over women in medicine; however, it appears that in some respects, Ireland was more liberal-minded with regard to the issue of women's entry to the medical profession. The *Freeman's Journal*, the main Catholic and nationalist newspaper of the late 19th and early 20th centuries, regularly carried articles in favour of the medical education of women, while the cause was also supported by some leading figures in Irish medicine, such as Dr Samuel Gordon, then president of the King and Queen's College, and Rev. Dr Samuel Haughton, as well as figures such as Dr More Madden, President of the Obstetrical Association of the British Medical Association in 1888.

Numbers of women medical students at Irish universities were low to begin with, with women only accounting for a small part of the medical class in the Queen's Colleges in the late 1880s and slowly rising in the 1890s and early 20th century. World War I proved a catalyst, with numbers of female medical students at the Irish universities increasing during the war years as more opportunities opened up for women in higher education and the workplace. Women medical students came to be seen as an important part of university life. However, this success was short-lived and numbers fell again at the

end of the War as large numbers of young men came back to fill the places in Irish medical schools. Women medical students tended to come a variety of backgrounds: as one might expect, a high proportion came from middle-class backgrounds, but a large number were the daughters of farmers.

There were several career options available to a medical student following qualification. Ella Ovenden, a graduate of the Catholic University, wrote in 1907 that it was difficult to give a definite idea of remuneration and prospects for women medical graduates. She claimed that the numbers of hospital appointments open to women were few and that they were not very highly paid. Many women medical graduates took posts as house surgeons and house physicians at Irish hospitals after graduation, which enabled them to gain this extra clinical experience. Others got involved in public health work and in women's and children's health. Some, such as Anna Dengel, an early woman medical graduate from Queen's College Cork, went to work as missionaries. With further research, I hope to be able to determine how successful early Irish women doctors were in their careers and the most common careers they undertook.

**Laura Kelly** is attached to the National University of Ireland, Galway. Her research is funded by the Irish Research Council for Humanities and Social Sciences.

## The impact of the Anatomy Act in Ireland

### INA SCHERDER

In September 2007, work began on a postdoctoral project, 'The impact of the Anatomy Act in Ireland: Body supply, medical education and professionalisation in Ireland: 1832 to 1921', sponsored by the Wellcome Trust. The main aim of the research is to fill a significant gap in the history of Irish medicine.

the 'unclaimed' bodies of those dying in workhouses, asylums, hospitals or other charitable institutions for medical training and research. This project explores the inner workings of Irish anatomical schools, by focusing on day-to-day training in human anatomy involving anatomists and medical students. An important aspect of that work is to elaborate how Irish medicine was influenced by European standards too.

One of the chief features of both a British and a European medical education was the need to ensure a constant supply of cadavers to train medical students in human anatomy. In countries such as France and Germany, legislation decreed that all bodies of those dying in the public hospital system could be used for medical research purposes because it was in the interest of state medicine. This stipulation was, however, sometimes at variance with northern European death customs that stressed the sanctity of the human corpse and the need to bury the body intact for cultural and religious reasons. Little work in fact has been undertaken on the impact of anatomy legislation, medical education standards and death customs across northern European countries. This project seeks to do so by comparing findings in the recent Irish study with those in Norway.

In August 2009, I thus took up a prestigious YGGDRASIL research fellowship funded by the Research Council of



**Right:**

A medical school dissection room. By J B Walters, 1897. In 1832, the Anatomy Act was passed in order to secure a legal supply of subjects for dissection in England, Scotland and Ireland. It allowed anatomy schools to use

Norway at the Health, Medicine and Welfare research group at the University of Bergen. My research will explore four key aspects of the history of anatomy in Norway.

First, I seek to understand the importance of the socio-cultural environment in determining the development of the medical profession following region-wide state-driven legislation in Norway and Ireland in the 19th century. In Ireland, body supply networks will be reconstructed that were negotiated by individual anatomists and medical schools with their asylum and Poor Law Union partners. For each medical school it will be possible to trace chronological fluctuations and geographical patterning in body supply and to reconstruct the negotiation strategies that anatomists employed to ensure supply continuity. In Bergen, for example, the leprosy archives with their rich sources provide a unique and very detailed insight into medical research, patients' treatment and medical training in 19th-century Norway.

Second, my work will investigate the changing medical curriculum in Irish and Norwegian medical schools with a particular focus on the place of 'hands-on' and full anatomy in the educational experiences of different cohorts of students. The experiences of the different medical schools in terms of their respective uses of body parts, full cadavers, wax models and theoretical texts will be analysed, and their approaches to anatomy within the wider curriculum will be located.

Third, I aim to understand the nature of anatomical education specifically and medical education more generally. In Ireland, the correspondence of individual anatomists, between institutions and individuals, and between institutions and regulatory authorities, was analysed to investigate the changing nature of anatomical and medical training. This should be compared with various sources in the leprosy archives such as patients' registers, sketchbooks, Department of Internal Affairs records and local administrative records that provide an excellent overview of the medical professionalisation process in Norway.

Fourth, I will examine, through private correspondence, newspaper reporting and the internal records of the schools, continuity and change in the perceived place of anatomical training in securing a 'good' medical education. More widely, the project will tease out the complex link between anatomical training and the nature, timing and structures of professionalisation in Irish medicine, and discuss disjunctures between professional and lay views of anatomy.

The overall aim of this comparative approach is to establish that there were important differences in medical education and professionalisation in northern European states, but that there were common characteristics too. The impact of national health and medicine legislation made at the local level was often determined by complex political, social and religious issues. Research will substantiate that despite the blanket provisions of the Anatomy Act, the scale of body supply to northern European medical schools everywhere was often fragile and variable. In Norway, despite the national health law of 1860, anatomists were constrained by the economic resources and the political context in which they operated in ways that are comparable to the Irish experience. Although medical schools in Ireland and Norway do exhibit important differences in the nature of their anatomical training and the place of anatomy in their general medical curriculum, the problem of body supply and the ways it could shape the history of anatomy tended to define Northern European medical standards.

I am grateful to Professor Astri Andresen of the Department of Archaeology, History, Cultural Studies and Religion, University of Bergen, for providing an opportunity to study these types of international synergy in the history of medicine.

**Ina Scherder** is a postdoctoral Wellcome Trust Fellow at the Centre for Health, Medicine and Society, Oxford Brookes University ([E ischerder@brookes.ac.uk](mailto:ischerder@brookes.ac.uk)).

## Enter the art historians: intersections in the histories of art and medicine

### TANIA A WOLOSHYN

**A growing field is emerging in the visual culture of the history of medicine – that is, in the intersections between art and medical histories. Wellcome Collection's ongoing exhibitions and image library are indicative of its own dedication and enthusiasm.**

But how does the art historian step into the disciplinary arena of medical history, and inversely, how does the medical historian approach its visual culture? Are we misguided or too poorly informed of the other's

complex history to venture into such an operation? And does the interdisciplinary historian run into the risk of becoming a 'Jack of all trades, master of none'? No historian would wish to garner the reputation of merely skimming disciplinary surfaces, yet perhaps such disciplinary boundaries are less stable than has been normalised in our contemporary research institutions?

I would argue that art and medicine interact in a complex dialogue, or even that historically such disciplinary boundaries have been permeable. Importantly, that dialogue is a relationship in which images are more than merely illustrative of medical



ideas or mechanisms, as visual simplifications of theories. So too it is a relationship in which medicine has affected perceptions and productions of art: its aesthetic grammar, its forms, its varying media. I present below a case study with excerpts from my doctoral dissertation, as one instance of how this dialogue between art and medicine has historically functioned:

*Vers la lumière: painters and patients on the Côte d'Azur, c.1887–1910*

As early as 1859, J B Girard characterised France's Mediterranean coast as the meeting point of the aesthetic and the therapeutic. He posed to his readers the question: "Where indeed can you find hospitality at once compatible with both art and health?" Girard emphasised that the appeal of towns like Cannes for the artist and the invalid was not to be located in its glamorous ballrooms or casinos, but rather in nature itself – in its natural grandeur. Almost three decades later, that vision of the region as naturally suited to art and to health had not altered. The very name, *La Côte d'Azur*, was coined by the poet-cum-tourist writer Stephen Liégeard in 1887. It was quickly used by physicians in their medical handbooks on descriptions of the region, and it must be stressed that this literary description of a landscape was especially understood in an aesthetic framework. It was a landscape of *colour*: an azure-coloured coastline.

Liégeard structured his guide as a poetic narrative that took the reader from west to east along France's southern coast, beginning with the town of Hyères and ending at Menton. Mary Blume declared that "Liégeard did more than describe the Côte d'Azur: he defined it. What he called a fringe of coastline, a ribbon, now had a memorable name: it was packaged." Liégeard's work, a folio-sized book full of prints and prose, is significant also because it spoke to the popular imagination with a distinctly medical consciousness. Of Cannes, he stated:

Because it is magical, this air...Ask our friend Gimbert, one of forty doctors assigned to the cult of health on these shores. According to him, the aerotherapeutic method is the speciality of Cannes. He was the creator of this medical religion, he remains its prophet, and he will not find it difficult to show you, by example, what the union of light, air, maritime breezes and temperature can do to awaken the invalid's sleeping functions.

Liégeard's description of a "cult of health" led by physicians in the region is a curious addition to a work of prose; his book was quite obviously not intended for a medical audience, nor was he a physician. In the book he would also quote from medical guides. Conversely, physicians were quick to incorporate Liégeard's poetic name into their vocabulary. Like Girard (1859), Liégeard and his medical colleagues perceived the Côte d'Azur as functioning as a kind of open-air sanatorium, at once beautiful and salubrious for the ill.

As an art historian, I approached the visual culture of this region as a locus through which complex perspectives collided, and as an agent communicating those perspectives. During this period, physicians and tourist writers shared an aesthetic perception of the landscape informed by visual and poetic works. So too did contemporaneous novels, poems and images perpetuate a deeply medicalised sense of place informed by medical geography and health tourism. It is only by first recognising their shared agency to engage the other that we, as historians of art and medicine, may come to collaborate in a truly interdisciplinary dialogue of our own.

Tania A Woloshyn is attached to the Universities of Nottingham and Richmond (E woloshyn.tania@googlemail.com).

**Above:**  
The Côte d'Azur's  
'landscape of colour'.  
iStockphoto/macumazahn

## Moving Image and Sound Collection

### CHRISTY HENSHAW

The Wellcome Library's Moving Image and Sound Collection is the largest collection of film, video and audio spanning 100 years of medicine and healthcare in Europe. It is an essential starting-point for any researcher, educator, student or browser interested in witnessing the evolution of medicine and health over the past 100 years and wanting to engage with the use of media as a communication tool in the medical sciences.



As well as Wellcome-originated titles, material has been sourced from broadcast television programmes, departmental collections from universities, associations, charities and eminent individuals. There are over 1300 films, 3500 videos and 1500 sound recordings aimed at both professional and non-professional audiences. The film items are mostly on 16 mm, with a few examples on 8, 9.5 and 35 mm. The video items represent many different formats, from the earliest examples of ¼" open reel tape, 1" IVC, MII, U-Matic and then Betacam SP to Digibeta. The obsolete formats present a significant conservation challenge for the Library in the future. The audio titles (broadcast and non-broadcast) are mostly held as audiocassettes and CDs. All our original material is kept in a temperature- and humidity-controlled environment.

Many regular visitors to the Wellcome Library would know us for our comprehensive collection of television programmes on health and medicine from the 1960s to the present day. In fact, many of the titles on older video formats and film have been transferred to VHS or DVD for consultation. It is our archival and mostly unique historical moving image collection that is consulted most by television, cinema producers and artists. Recent credits include BBC TV's *Panorama: The trauma industry* (excerpts from *War neuroses*), *Andrew Marr: Darwin's dangerous idea* and *What Darwin Didn't Know* (excerpts from *Heredity in Man*), and *Who Do You Think You Are? Rick Stein* (excerpt from *D-tubocuraine*). The artist Douglas Gordon famously incorporated excerpts from *War neuroses* in his video installation work *Trigger Finger* (1994).

#### Above:

A demonstration of the Burstall respirator, from the 1940s film *Artificial respiration*.

As part of the Library's Digitisation Strategy, Wellcome Film ([library.wellcome.ac.uk/wellcomefilm](http://library.wellcome.ac.uk/wellcomefilm)) makes over 450 titles or 100 hours of footage readily accessible online and available under Creative Commons licences. This resource has been created by the Wellcome Library in partnership with JISC Collections, which also manages the Film and Sound Online service. The material has been encoded to a number of digital file types for ease of access.

Highlights include footage of Sir Henry Wellcome, including rare footage of him in Gebel (or Jebel) Moya in Sudan as well as scenes of everyday life, archaeological digging, communal sports and recreation. He funded the excavations between 1911 and 1914 as a public works project. Breakthrough drug treatments feature in the collection – cures for disease were researched and developed by Wellcome's pharmaceutical business of the time and laid the foundations of the biomedical charity of today. Even today there is an enduring legacy of research into tropical medicine dating from the period. Films in this area cover topics such as schistosomiasis and the tsetse fly.

For the researcher, the scholar or the naturally curious, Wellcome Film chronicles the history of medicine over the last 100 years: from early bacteriological research into typhus and cholera (with footage originating from the Bombay Plague Laboratory) to reconstructed experiments in Ivan Pavlov's laboratory and forgotten treatment regimens for respiratory paralysis.

An important narrative to emerge from the 1940s onwards is public health in the UK, demonstrated within Wellcome Film by public information films on subjects such as immunisation and smoking from the British government's archives. This collection is our first 'virtual' collection – the Library has a licence with the British Film Institute to provide and make available this content via the Wellcome Film online service. It comprises 100 public information films made by the government's Central Office of Information.

Assistant Curator Lucy Smee has been working on the project for over a year, and she has watched and catalogued almost every title. She says that stand-out titles for her have been the quirkier ones such as *Neuromuscular block* (1956), in which a claymation character recites poetry about muscle relaxants – uncommon, even in the medical film genre!

The collection has also given her an insight into the representation of women and mothers in medical film. An excerpt from *Toxemia in Pregnancy* (1958), in which expectant mums are divided into types is a particularly good example: Mrs Stout eats too much, Mrs Jitters worries too much, Mrs Pale smokes too much and Mrs Weary already has a very large family.

The Curator of the Moving Image and Sound Collection, Angela Saward, comments that one of the most pleasing successes of the project has been to also post many of the

films and videos online on Wellcome Film's YouTube channel ([www.youtube.com/WellcomeFilm](http://www.youtube.com/WellcomeFilm)). One film from the 1930s, *Mechanism of labour*, has been viewed over 7700 times in six months – undoubtedly exceeding its original distribution many times over. With powerful administrative tools provided by YouTube, it's possible to see how widely the material is shared and commented upon all around the world and we can significantly expand the potential reach of the collection.

Finally, a few words about the sound collection. The approximately 1500 audio titles include recordings of broadcast radio programmes on medical, biomedical and medical-historical topics. The non-broadcast material includes recordings documenting relevant exhibitions, interviews, lectures, conferences, seminars

and symposia, many of which were organised by the Wellcome Trust. Highlights of the collection include: recordings of Florence Nightingale's appeal on behalf of the veterans of Balaclava (1890); a recording of the 'Tarantella' – a musical therapy, in Italian, for people bitten by a tarantula (1954); a short BBC interview with Alexander Fleming in which he speaks prophetically about the dangers of overexposure to antibiotics (1945); and a series of programmes containing heart sounds and murmurs intended to aid the medical practitioner in the diagnosis of disease (1949). This collection is currently being assessed for digitisation.

**Christy Henshaw** is Digitisation Project Manager at the Wellcome Library. For the Moving Image and Sound Collection, see [library.wellcome.ac.uk/misc.html](http://library.wellcome.ac.uk/misc.html).

## Today's Neuroscience, Tomorrow's History

### RICHARD BARNETT

Strange as it may seem, we live in an age of archives – of vast, searchable digital databases of books, films, music, friends, fact(oid)s, headlines; of an (apparently) democratic drive towards free, universal access to all kinds of information.

'Today's Neuroscience, Tomorrow's History', a Wellcome Trust-funded oral history project led by Professor Tilli Tansey of the Wellcome Trust Centre for the History of Medicine at UCL and Professor Les Iversen of the University of Oxford, aims to take the illustrious past of neuroscience into this democratic digital future, via an ongoing series of interviews with prominent contemporary neuroscientists.

Reviewing this project is an odd, dislocating process, because my experience of it is necessarily quite different from that of most potential readers/watchers/downloaders/consumers – what is the proper name for those who may be experiencing this project as a printed transcript, as words on a computer screen, as an audio file on an MP3 player, as a YouTube clip, or as any or all of these media? The project as I am reviewing it consists of four DVDs, each in a sleek, elegant, UCL- and Wellcome Trust-branded slipcase. Each DVD – both as a material object and as an experience on the screen – is faultlessly produced. The menu is easy to navigate, the lighting perfect, the sound crystal clear, the editing smooth, the narrative arc well-balanced. Occasional captions serve as visual 'footnotes', providing the full name of a colleague or institution mentioned in passing. Any oral historian who has struggled with outdated tape-recorders, recalcitrant batteries, tongue-tied subjects, passing tractors or unidentifiable jargon will be deeply and immediately envious of the sheer technical quality of these films.

But these films are not intended to be consumed as DVDs: only a small number have been produced, and most of these will be distributed as teaching aids. In keeping with the Trust's policy of widening access to research it funds, and following the Wellcome Trust Centre's Twentieth Century Medicine Project's programme of making its Witness Seminar series available online, the major portal is the project website at [www.ucl.ac.uk/histmed/audio/neuroscience/](http://www.ucl.ac.uk/histmed/audio/neuroscience/). Through this site one can access transcripts of the interviews, audio-only podcasts and video clips via YouTube. Both the podcasts and the video clips are presented as individual chapters, and, while the sound quality in both is excellent, the video quality is much lower than that of the DVD.

However you prefer to consume them, these 'interviews' are in one sense nothing of the sort: the interviewer – Richard Thomas – is present only as a name in the credits and as a (presumed) presence behind the camera. These films are edited autobiographical monologues, offering the voices of the powerful, the successful, the confident, the eloquent – an impression reinforced by the web pages accompanying each film, which list the achievements and honours accrued by the interviewee. Each interview takes place in what appears to be the interviewee's personal office, as though they have snatched a few minutes away from the demands of the laboratory or the clinic or the operating theatre. They sit in large, dark chairs against a wall of books or files or journals, quite literally backed up by a lifetime's accumulated learning. Each film is divided into a dozen or so chapters – 'School days in South London', 'The secret of a great laboratory', 'Things remembered: inspiring the clinical community' – in which the interviewees talk affectionately about their family life, about a teacher or a book or an encounter that led them towards science or medicine, about their first steps into research or practice, about their successes, about their reflections on a life spent in service to biomedical research.

The remit and the anticipated audience for this project clearly stretch far beyond the domain of academic history of medicine, and to judge it only from this perspective is to do it less than full justice. But ‘Today’s Neuroscience, Tomorrow’s History’ will surely face many of the same criticisms as the Twentieth Century Medicine Project’s Witness Seminars. Historians will want – will need – much more information on the decisions lying behind the production of these films before they use them in peer-reviewed research. How were interviewees selected? Who decided on the themes of each film, and who made the final editorial choices? Most of all, what about the voices we don’t hear – the laboratory technicians, the representatives of funding bodies, the legislators, the patients, those whose research was not funded? As it stands, the website and its films lack this crucial element of context, both editorial and historical. They badly need supporting information: further reading, links to other similar projects, details of

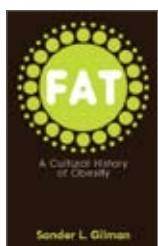
archives and libraries holding related material, and (most of all) some sense of the aims and assumptions of the researchers behind the project.

‘Today’s Neuroscience, Tomorrow’s History’ makes big (and not particularly specific) claims about its potential audience: according to their website, Tansey and Iversen hope to provide “resources about contemporary neuroscience for the use of present and future historians, as well as journalists, policy makers etc...the potential to engage young neuroscientists with their own history... [and] more general educational outreach activities”. To aim at all of these targets is to run the risk of hitting none, and more critically minded engagement at the expense of some broader appeal would have given these films the power and the impact they otherwise struggle to achieve.

[www.ucl.ac.uk/histmed/audio/neuroscience/](http://www.ucl.ac.uk/histmed/audio/neuroscience/)

**Richard Barnett** teaches in the Department of History and Philosophy of Science at the University of Cambridge.

## Fat: A cultural history of obesity



### THEA VIDNES

*Fat* is a slim book on an ever-expanding subject. In under 200 pages, Sander Gilman selects several ways to view the issue – as epidemic, in childhood, as stigmatising condition, as ethnic problem, in Chinese peoples – in each case incorporating evidence from historical and contemporary political, medical and popular culture sources to expose the complexity and multiple contradictions inherent in our past and current dealings with the condition.

To interrogate what lies behind the ‘moral panic’ that has come to surround obesity and its apparent increase worldwide (‘globesity’), Gilman employs an imaginative array of sources. The introduction alone features obesity paralleled with George W Bush’s speeches on the threat of avian flu and SARS, the dietary opinions of Henri Brillat Savarin, Dr Kellogg, Immanuel Kant, Friedrich Nietzsche and Martin Luther, and Thomas Hobbes and Walt Whitman on the dangers of a bloated ‘body politic’. From there on in, moving effortlessly back, forth and sideways, the author uses scientific and medical writings, WHO directives, political speeches, novels, opera, films, and even Richard and Judy and Jamie Oliver, to illuminate and contest the many links and assumptions that currently abound regarding obesity.


In the ‘Epidemic Obesity’ chapter, use of the former term to describe the latter is deconstructed; the

significance is noted, the validity challenged. Focusing mainly on SARS (but with pertinent references to HIV/AIDS and BSE/vCJD), obesity is compared and contrasted. Just one among many points made is that the long-held cultural bias – that plagues and epidemics spread from the East to the West – can also be shown to pertain to significant overweight. Just as SARS had its source in fowl from East Asia, so a potential viral cause of obesity (‘infectobesity’) was first isolated in chickens in Bombay. That said, Gilman neatly subverts this position in the final chapter, ‘Chinese Obesity’. Just one of the numerous areas examined is how the condition in China is regarded as a consequence of ‘Occidentalisation’: “‘contamination from the West’ has come to be part of the imagined etiology of obesity in contemporary medicine in China (PRC) as well as in western (US/UK) medicine dealing with the Chinese from the diaspora”.

Joe, the ‘fat boy’ in Charles Dickens’s *The Pickwick Papers*, is a key point of reference in the chapter on ‘Childhood Obesity’. Here Gilman charts concern with excess body weight in children from the 19th century onwards. Moral and degeneration-based worries of the Victorian era are shown to have given way by the 1930s–40s to physiological (endocrine-based) accounts that were themselves partially superseded by Hilde Bruch’s psychoanalytical reading three decades later. Within the past ten years, physiology has regained the upper hand with the discovery of the ‘obesity hormone’, leptin; Joe has become “simply a massive sufferer from the underproduction of leptin”.

Bruch features more prominently in ‘Obesity as an Ethnic Problem’. Her psychoanalytical thesis is explained and contextualised as a counter to the racial

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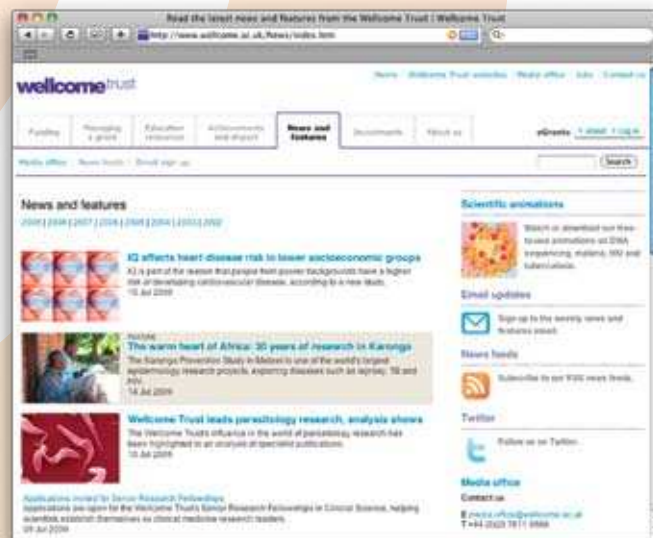
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and then biological theories of obesity that had previously predominated. The majority of the chapter focuses on the historical intertwining of Jews with obesity and diabetes – both regarded, at least until the mid-20th century, as characteristically Jewish afflictions. I found Gilman's rapid but dense analysis of this rather difficult to follow in places; his ability to take an example-laden argument in many different directions within a few lines or paragraphs demands no meagre portion of mental agility.

Elsewhere, Shakespeare's Falstaff is the principal lens through which 'The Stigma of Obesity' is scrutinised. Gilman teases out the way the character has been appropriated in various ways at differing times to communicate overweight people as de-sexed: objects of mirth flawed by food and their figures. 'Regions of Fat' meanwhile considers the contribution of race and religion to the prevalence of obesity, especially in southern US states. Drawing on *Gone with the Wind* and John Kennedy Toole's *The Confederacy of Dunces*, it explores notions of ethnic vigour in relation to physique, and 'stout' as powerful but 'fat' or 'obese' as diseased.

*Fat* is undoubtedly impressive. With intellectual breadth and depth, Gilman can probe hard what it is we understand by the term 'obesity' and how this relates to politics, science, medicine, media and fiction past and present. His mastery of sources from disparate spheres is remarkable; it is difficult enough to relate, and impossible to re-create, the flair with which he considers this subject. For the scholar, the endnotes and further reading section also ensure that this work forms a very useful resource.

But whom is this book aimed at? Its eye-catching cover, relative brevity, absence of footnotes and frequently witty, exclamation mark-peppered prose suggest a general audience. However, as indicated above, there is a lot to digest: the actual substance of the text, and the intricate (sometimes labyrinthine) arguments made, tend to recommend a more specialist readership. All told, the appearance belies the richness of the meal.

Gilman SL. *Fat: A cultural history of obesity*. Cambridge: Polity Press; 2008.

**Thea Vidnes** is attached to the Wellcome Trust Centre for the History of History of Medicine at UCL.



# Asian Society for the History of Medicine Fifth Conference

## Climate, Environment and Disease: Crossing Historico-geographical Boundaries

The Asian Society for the History of Medicine is pleased to announce its Fifth Conference. It will take place on **7–9 October 2010 in Suwon, South Korea**, a historical city famous for the Hwaseong Fortress (on the UNESCO World Heritage List).

The Asian Society for the History of Medicine welcomes paper submissions from general historians as well as from medical historians. We particularly invite those historians who have worked on climate, environment and disease from a historico-geographical perspective. Although submissions from all eras and regions are welcome, the Conference's special emphasis will be placed on the following topics in terms of world history:

- Comparative Ecology of Climate and Disease between the East and the West
- Nature, Humanity and Race
- Asian Black Death and Global Environment

- Little Ice Age, Global Warming and Epidemiological Transformation
- Tropical Diseases and Hygiene
- Relationship between Globalisation and Nationalism in the Making of Modern Medicine
- Biomedicine vs Environmental Medicine.

Proposals for presentations (lasting up to 20 minutes), preferably in Microsoft Word format and under 2000 words, should be sent to the Organising Committee Chair:

Jong-Chan Lee  
Department of Medical Humanities and Social Medicine  
School of Medicine  
Ajou University  
Suwon, 422-721  
Republic of Korea  
**E** [jclee@ajou.ac.kr](mailto:jclee@ajou.ac.kr)

The proposal submission deadline is 30 June 2010 and the pre-registration deadline is 31 July 2010.

# Scratching the Surface: The history of skin, its diseases and their treatment

**An international conference hosted by the History of Medicine Unit, University of Birmingham, 29–30 October 2010, and sponsored by the Wellcome Trust and the Society for the Social History of Medicine.**

This conference seeks to address the subject of skin, its diseases and their treatment broadly since 1700. It aims to bring together individuals working in very different sub-fields in medical and cultural history over the past three centuries, and to promote discussion of the subject in the context of the history of specialisation more generally, as well as the history of senses, sight, smell and touch being central to understandings of skin disease and the way in which such diseases are experienced by practitioners, patients and the public historically.

The organisers invite proposals for 20–30-minute papers on any aspect of the history of skin and its diseases since 1700. Abstracts should be 200–300 words in length and will be received until 30 April 2010. A programme will be advertised in June 2010.

For more information, please contact the organisers: Dr Jonathan Reinartz, University of Birmingham, UK ([j.reinartz@bham.ac.uk](mailto:j.reinartz@bham.ac.uk)); and Professor Kevin Siena, Trent University, Canada ([ksiena@trentu.ca](mailto:ksiena@trentu.ca)).

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