genmedhist

Newsletter No.16, November 2012

GENETICS & MEDICINE HISTORICAL NETWORK

Contents

Introduction

The past year has been a busy one for the Genetics and Medicine Historical Network. It saw the successful completion of the 5th International Workshop on Genetics, Medicine and History in Nuremberg, Germany, 21-23 June 2012. Articles in this newsletter by Richard Aspin (Wellcome Library) and Pim Huijnen (Utrecht University) describe in detail new and exciting historical projects which were discussed at the workshop. Planning is already underway for the next workshop which will be held in Milan, Italy, 29-30 May 2014. Please save the date in your calendars for what I'm sure will be an exciting meeting!

As Peter Harper (Cardiff University) relates in an article below, we have good news, as well, about the long-term future of our website www.genmedhist.org which will soon be hosted by the European Society of Human Genetics and permanently archived by the British Web Archiving Initiative.

This edition also contains news of several important archiving and cataloguing efforts currently underway at Edinburgh University, the John Innes Centre, and the Wellcome Library, as well as an important international initiative underway at the Wellcome Library and Cold Spring Harbor Laboratory to preserve and catalogue important materials produced during the Human Genome Project.

An update on the latest historical research being carried out in the field has been provided by graduate students Andrew Hogan (University of Pennsylvania), Devon Stillwell (McMaster University), and Catherine Zwicker (University of Alberta). Congratulations go to Dr. Zwicker on the recent successful defence of her dissertation.

News of ongoing projects or upcoming events that Network members would like to see included in our next newsletter may be sent to me at jfriedma@uvic.ca.

I would also like to say thank you and farewell to Jo Richards whose help with the newsletter in past years was invaluable and welcome Mark Curran who has recently joined us in her place.

Judith Friedman

Announcement

The 6th International Workshop on the History of Human Genetics will be held as a Satellite Meeting of the European Society for Human Genetics Annual Meeting in Milan, Italy, 29-30 May 2014.

Suggestions for themes for the upcoming workshop may be sent to the conference organizers Heike Petermann (heike.petermann@uni-muenster.de) or Judith Friedman (jfriedma@uvic.ca)

Further information (when available) on: www.eshg.org

La Scala - courtesy Dan Kamminga

The GenMedHist website

Plans for the future and preserving the past

The year 2013 will mark 10 years since the genmedhist website was founded, and planning has been going on to give it a secure future. Throughout the past 10 years the site has been hosted by Cardiff University, but European Society of Human Genetics (ESHG) has now offered to act as host, and will take on this responsibility from 2013. This is a particularly appropriate development, since ESHG has been closely associated with genmedhist activities since the beginning, notably with the alternate yearly worskhops which have become a regular part of ESHG's satellite meetings.

Those actually using the genmedhist website will initially notice little change; the URL will stay the same, and the content will mostly be transferred unaltered. We hope, though, that the change will allow an improved format and other possibilities, since the current 10 year old design of the site will benefit from ESG's modern facilities. Now is a good opportunity to thank Cardiff University, and especially Jeff Alderman who designed the site originally and has remained involved up to the present.

Websites are often impermanent and at risk of being lost, so we have been concerned to avoid this happening to genmedhist. Fortunately the Wellcome Library have been extremely helpful in this, and have arranged for the site to be archived on a regular six monthly basis by the British Web Archiving Initiative. This means that past content will be preserved, even if there are major changes to the site in future. Special thanks are due to Simon Chaplin, Head of Wellcome Library, and Dave Thompson, Head of Digital Archives at Wellcome Trust, for this.

As further development of the genmedhist website, the Newsletter and the various activites which these record continues, achieving both a secure future and past for the website in this way should provide real encouragement to all users and contributors. As someone with little web experience myself, I feel greatly privileged to have had the support of expert advice and practical help over the 10 years since genmedhist was born.

Peter Harper

5th International Workshop

5th International Workshop in the History of Human Genetics, Nuremberg Germany, 21-23 June, 2012.

The fifth historical satellite workshop of the European Society of Human Genetics (ESHG) "The Biological Future of Man: Continuities and Breaks in the History of Human Genetics, Before and After 1945" was held this June in Nuremberg, Germany. The meeting began at the Nuremberg Documentation Centre in the former Congress Hall at the Nazi Party Rally Grounds. Participants were introduced to the Documentation Centre by Director Hans-Christian Täubrich and then toured the permanent exhibition "Fascination and

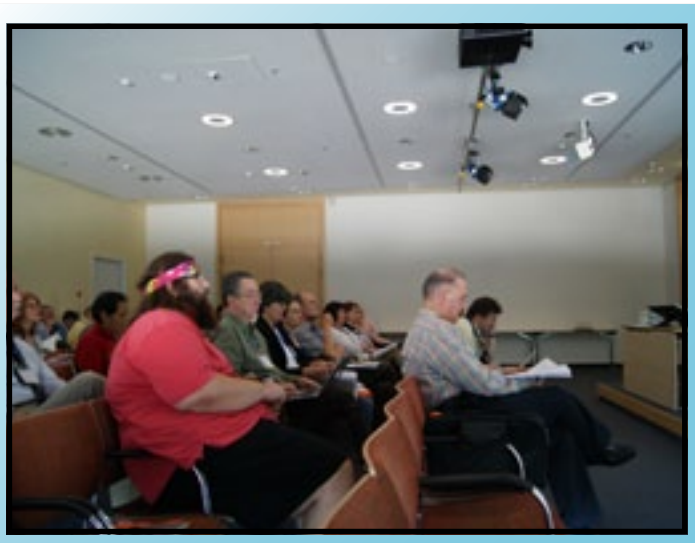
Opening Reception

Terror" which included subjects such: the events which took place at the Nazi Party Rally Grounds; the passing of the Nuremberg Racial Laws in 1935; the events of the Holocaust and the Second World War; and the Nuremberg Trials which took place in 1945/6. A reception followed the tour.

Workshop sessions began the following day at the Nuremberg Convention Center Ost. The 35 participants were welcomed by workshop organizer Heike Petermann (University of Muenster). The first invited lecture was given by Nils Roll-Hansen (University of Oslo) who spoke on "Eugenics and the Science of Genetics." Roll-Hansen argued that human genetics, in comparison to plant and animal genetics, remained underdeveloped and backward until the 1960s. This allowed leeway for eugenic legislation to be enacted through the 1950s for eugenic and family planning purposes. His talk centred mainly on Sweden where eugenic sterilization legislation was passed in 1934 and remained in place through 1975.

The conference covered three main topic areas. The first was "Human Genetics Before 1945" and 5 speakers spoke to the subject over three sessions using a variety of approaches and covering a number of geographic areas. Alan Rushton's (Flemington, New Jersey) talk on Charles Eduard of Saxe-Coburg related the story of how Queen Victoria's grandson became a member of the Nazi Party and head of the German Red Cross. Charles Eduard remained a supporter of Nazi policies even though his own niece Princess Karoline Maria was killed by the Action T4 euthanasia programme. In her talk on IQ tests, Yuriditzi Pascacio-Montijo (University of Bielefeld) challenged the use of intelligence testing to reify a subjective observation and questioned the

Conference organizer Heike Petermann welcomes workshop attendees



The audience

biological assumptions that underlay the use of the test. Philip Wilson (Penn State University College of Medicine) discussed the collection and use of human pedigrees by the US Eugenics Record Office as both subjects of study and objects used to persuade the public of the scientific validity and usefulness of eugenics. Judith Friedman (National Institutes of Health) explored different approaches taken by physicians and scientists in the study of hereditary disease before the Second World War. Pim Huijnen (Utrecht University) related the construction of a new data-mining tool which will allow researchers to search through the contents of digitized newspapers in order to analyze how key eugenic words and phrases were used in public discourse.

In the afternoon following the coffee break, the first of the papers discussing the second main conference topic "Continuities in the History of Human Genetics" began with Pascal Germann's (University of Zurich) analysis of the work of Ernst Hanhart a pioneering Swiss medical geneticist. Germann argues that despite publically opposing the use of race as a genetic category after the Second World War that Hanhart continued to use older eugenic categories like race in his research into the 1960s. In their talk "Genome: Twisting Stories with DNA" Ricardo Noguera-Solano (Universidad Nacional Autónoma de México) and Juan Manuel Rodriguez-Caso (Leeds University) explored the different meanings of the term 'genome' and the ways that it has been used by scientists from the 1920s to the present.

The first day of the workshop closed with the second invited lecture given by Paul Weindling (Oxford Brookes University) titled "The Nuremberg Trials and Their Implications for Human Genetics." Weindling primarily discussed the Nuremberg medical trial and noted that

several key actors including Ernst Rüdin, Otmar von Verschuer, and Fritz Lenz were not among those tried. The medical trial included the testimony of victims and witnesses and the judges' declaration at the conclusion laid the foundation for the idea of the informed consent of research subjects. However, none of those tried had their medical credentials stripped from them. In fact one of the defendants, Helmut Poppendick, even went on to complete his MD thesis after the war after only serving a small portion of his 10-year sentence.

At the end of the second day of the workshop the participants met for dinner at the Lederer Kulturbrauerei, an old former brewery where we enjoyed buffets of Franconian and Mediterranean food. The beer garden of the restaurant was packed with a boisterous local audience watching Germany win the Euro 2012 semi-final.

The final day of the workshop began with an invited lecture by Stephan Kolb (Klinikum Nürnberg Nord) who spoke on the topic "Informed consent – an Essential of Medicine. Consequences of the Nuremberg Doctor's Trial." Kolb raised the issue that despite the principles set forth by the judges at the trial that the voluntary consent of subjects was essential for ethical medical research, many research projects carried out over the following decades failed to take this into account. He argued that even today informed consent is not taken as seriously as it should be by doctors and scientists.

The remaining sessions dealt with the final workshop topic "Human Genetics After 1945." Susanne Doetz (Charité-Universitätsmedizin Berlin) examined how human genetics developed within the context of the socialist society in the German Democratic Republic and how ideology shaped policies towards genetic counselling and prenatal diagnosis. In her talk, Christine Scholtz (Deutsche Gesellschaft für Humangenetik) looked at the professionalization of the field of human genetics in Germany over the last 50 years and how institutional settings and the development of new specialties like 'clinical genetics' and 'clinical laboratory specialists' have affected the profession. Richard Aspin (Wellcome Library) introduced the workshop participants

Paul Weindling

to an exciting new on-line resource currently under development by the Wellcome Library. This portal will serve as a digital archive making materials related to the 'foundations of modern genetics' available to researchers from around the globe. The final talk was by conference organizer Heike Petermann (University of Muenster) who traced continuities and breaks in the development of human genetics in Germany before and after 1945 in the context of institutions, researchers, and topics. She noted that certain individuals involved in eugenic research before the war continued in the field after the post-war reconstruction but that the meaning of eugenics shifted from a wider social one before the war to a more individual one after 1945.

At the end of the day the participants agreed that future historical workshops should continue to be held in conjunction with the European Society of Human Genetics meetings. Heike Petermann and Judith Friedman agreed to co-organize the next workshop. The 6th International Workshop on the History of Human Genetics will be held in Milan, Italy, 29-30 May 2014.

We would like to thank the Deutsche Forschungsgemeinschaft, Bonn (DFG) and the European Society for Human Genetics, Wien (ESHG) for financial support which made the meeting possible.

Photographs courtesy Danilo Schramm (University of Muenster)

The 5th International Workshop Programme can be viewed on the GenMedHist at the following link:
http://www.genmedhist.info/Workshops/2012-ESHG-Workshop-Programme

Conference Reports

1. Canadian Society for the History of Medicine (CSHM) Annual Conference, 2012.

The University of Waterloo played host this year to the annual Canadian Society for the History of Medicine meeting. Held between May 26th and 28th, the conference comprised two and a half days of paper presentations by historians and other scholars hailing from a variety of Canadian and American academic institutions. Many papers, and even entire panels, covered topics of interest to physicians, geneticists, and historians of genetics. My own paper, which was part of a panel on reproductive technologies, explored the early days of genetic counseling in the United States with attention to the how the field's professionalization was shaped by interactions between Masters-level genetic counselors and physician-geneticists. Other topics related to genetics and reproductive health such as medical responses to infertility, abortion access and activism, and state involvement in birth control, pregnancy and sexuality were featured at length. Canada's history of eugenics was also discussed by Queen's University Ph.D Candidate Lorne Beswick in his paper on the Eastview Birth Control Trial.

Monica H. Green of Arizona State University gave the CSHM Paterson Plenary Lecture titled "The Medievalist and the Microbiologist: How Plague and Leprosy Have Opened Up New Perspectives on the History of Medicine". Green explored the meanings of the 2001 sequencing of the plague and leprosy genomes for historical research. She emphasized the ways in which the work of paleopathologists and microbiologists can be useful for historians interested in the history of these two diseases between the 5th and 15th centuries. Green also spoke more broadly about the potential of scientific methodologies for historians working on the history of health and medicine within a global context.

Panelists at the CSHM meeting also presented on a range of other themes. Two panels engaged topics in premodern medicine ranging from the history of pain to the impact of cattle pestilences on human health. The majority of the conference, however, focused predominantly on 19th and 20th century histories of medical education, nursing, mental health, medical research, and drugs and alcohol. Overall, the annual meeting fostered abundant, fascinating discussions about current research and future directions in the history of health and medicine.

Devon Stillwell, McMaster University

2. American Association for the History of Medicine 85th Annual Meeting Baltimore (Maryland, USA) 26 – 29 April, 2012.

The Annual Meeting of the American Association for the History of Medicine was held this year in Baltimore, MD, USA. A highlight of the meeting was the Fielding H. Garrison Lecture given by Professor Susan Reverby from Wellesley College, who received a standing ovation for her talk "Enemy of the People, Enemy of the State: Two Great(ly Infamous) Doctors in the Court of History." Several sessions at the conference might be of interest to Newsletter readers.

"The Politics of Medical Contraception and Abortion" featured two engaging papers. Lara Freidenfelds, an independent scholar based in Chatham, NJ, gave a paper about the fuzzy line that existed between contraception and abortion in the 19th century. As part of this, Freidenfelds described various strategies woman at the time used to lower their lifetime number of pregnancies, which included a range of methods spanning from attempts to prevent conception, to purposely not taking precautions that might prevent miscarriage, to attempting to physically bring about miscarriage. Alicia Puglionesi, from Johns Hopkins University, gave a very interesting talk looking at the door-to-door sale of books discussing sex and birth control. Puglionesi explored the ways that salesman managed this complex marketplace from the middle layers, by actively promoting and providing this reading material, while at the same time subverting decency statutes like the Comstock Law.

In a session dedicated to medical genetics titled "Negotiating Genetic Diseases," Andrew Hogan, a PhD student from the University of Pennsylvania spoke on "The Changing "Look: of Disease: From Patients to Banding Patterns in Medical Genetics." He examined how the assessment of patients with Fragile-X syndrome evolved following development of new genetic technologies from a disease defined by clinical characteristics to one based on chromosomal analysis. In her talk, Judith Friedman from the Office of History at the National Institutes of Health, explored the importance of perspective on a researcher's the ability to perceive unusual patterns in hereditary diseases. If they studied individual families they were more likely to observe findings of anticipation in illnesses like myotonic dystrophy or Huntington's disease but if researchers examined wider populations such findings were generally obscured.

In the session "Racial Degeneration and Eugenics" Leslie Baker, a PhD student from the University of Saskatchewan gave a talk which discussed how the Canadian province of Nova Scotia utilized public schools as a venue for enacting its eugenic policies and explored the fate of children singled out as 'unfit'. Michael Brown, University of Roehampton, explored eugenics in the context of the British Empire at the end of the nineteenth century in his talk "Medicine, Mechanism and Masculinity: Social Darwinism and the Anxieties of Late Victorian Empire." In the final paper of the session Amy Samson, a PhD student from the University of Saskatchewan, examined how social workers in the Canadian province of Alberta were recruited by the provincial Eugenics Board to extend their surveillance into the broader community and the role of guidance clinics as well as hospitals as sites for the eugenic assessment of individuals.

An excellent session called "Our Bodies, Our Choices: The Language of Choice and Patient Responsibility", featured three papers that explored the rise in demand, during the 1960s and 1970s, for greater reproductive and health care choice. Alex Mold, of the London School of Hygiene & Tropical Medicine, presented on the complexities of offering broader choices within the British National Health System. She explored market and anti-market perspectives and the collective vs. individual viewpoint, ultimately showing that more than increased choices, patients sought better service from the system. Elizabeth Toon, from the University of Manchester, followed with an engaging paper about mastectomy and consent in the 1970s. Toon traced the growing activity of the media during this era in presenting the confusing, and sometimes devastating, process of undergoing a biopsy, sometimes followed immediately by mastectomy, due to the suspicion or diagnosis of breast cancer. Jenna Healey, of Yale University, gave the final talk of the session, which looked at the National Organization for Non-Parents, in the 1970s. Healey followed the history of this organization as it transitioned from its more reactionary roots, to become a professional support group that promoted choice and social support for all people in the realm of reproductive freedom.

Andrew Hogan (University of Pennsylvania)
Judith Friedman

3. Seventh British-North American Joint Meeting of the BSHS, CSHPS, and HSS, (Philadelphia Pennsylvania, USA) 11-14 July 2012.

Over three hundred scholars from British, Canadian, and American history of science societies met at the Three Societies Conference held at the University of Pennsylvania. Lively discussion followed the keynote address "Into All the World: Expanding the History of Science and Religion Beyond the Abrahamic Faiths" given by Ronald Numbers (University of Wisconsin-Madison).

Three sessions at the conference might be of particular interest to Newsletter readers. The first "Genetics, Race, and Anthropology" contained two papers which discussed the work of the anthropologist Franz Boas. Boas' approach to racial categories during his anthropometric studies in the Oklahoma Territory was examined by Staffan Müller-Wille (University of Exeter). Veronika Lipphardt (Max Planck Institute for the History of Science) discussed the racial studies carried out by the Jewish-German physician and anthropologist Wilhelm Nussbaum on German Jews between 1933 and 1935 and the importance of this collection in enabling Nussbaum to secure employment as a research associate of Franz Boas and leave Germany before the beginning of the Second World War. The

development and role of institutional divisions in the study of anthropology in Germany following the Second World War was the subject of a paper by Amanda Randall (University of Texas at Austin). Elizabeth Neswald (Brock University) described how the scientific study of the human metabolic rate came to be applied to the search for measurable racial differences in the 1920s and 1930s.

The second session explored the importance and role of different types of mechanisms in human and medical genetics. It began with a talk by Nathaniel Comfort (Johns Hopkins University) on "Genetics without Sex: Going Molecular in Human Genetics" who argued that the development of tissue culture allowed the (increasingly molecular) study of human cells as proxies for whole organisms thereby removing the constraints of sex in the study of human genetics. Andrew Hogan (University of Pennsylvania) examined how discoveries in the field of cytogenetics in the late 1960s and 1970s came to be integrated in the study of an existing clinical disorder of X-linked intellectual disability and gave rise to Fragile X syndrome in the early 1980s. The importance of the presence or absence of an acceptable biological mechanism to establishing the validity of controversial clinical findings in the generational study of certain hereditary diseases was discussed by Judith Friedman (National Institutes of Health). Jessica Mozersky (University of Pennsylvania) examined the ways in which a population of women at risk for developing hereditary breast cancer used various constructions of collective Jewish history as a way of exploring, explaining, and understanding that risk. The session was moderated by Susan Lindee (University of Pennsylvania) who provided insightful comments on the papers and led a lively discussion at the end.

"Tempo and Mode in Mid-Twentieth-Century Genetics" explored different ways that technological developments allowed scientists to 'suspend', 'speed up', and 'make visible' the effects of time. Joanna Radin (University of Pennsylvania) explored the important role that the development of cryo-technology and cryobiological techniques had in allowing researchers to essentially freeze time by freezing their samples for later study. The use of colchicine as a way to speed up evolutionary time by inducing changes in chromosome number in plants was discussed by Helen Curry (University of Cambridge). Jenny Bangham (University of Cambridge) examined how the technology of blood group testing and the analysis of the distribution of blood groups within populations were used to extrapolate the historical movement of populations and explore questions of relatedness, racial identity, and historical narratives after the Second World War.

Judith Friedman

4. History of Science Society 2011 Annual Meeting Cleveland, OH, 3-6 November 2011.

The History of Science Society convened for its annual meeting in Cleveland, OH in November 2011. For scholars of medical genetics, one session was particularly noteworthy: "Putting the Human into Human Genetics." This session provided a comprehensive look at how the human gene has influenced and interacted with medical practice, research, concepts of disease, and clinical settings.

In his paper, "Heredity Clinics: Hybrid Institutes of Human Genetics," Nathaniel Comfort (Johns Hopkins University) examined the institutionalization of medical genetics in the United States. Heredity clinics were established during the early to mid-twentieth century—the same era in which the eugenics movement declined. Comfort's paper, thus, explored the historical relationship between the eugenics movement and heredity clinics arguing that the former did not impede the development of the latter. Rather, the eugenics movement encouraged the medicalization of genetics research and clinical practice by scientists and clinical practitioners who aimed to relieve human suffering.

Research was an important component in the medicalization and institutionalization of medical genetics and, by the 1950s, was expanding considerably. The 1956 discovery that the normal human cell consists of 46 chromosomes marked the emergence of human

cytogenetics and a point after which research on chromosomal abnormalities flourished. As Soraya de Chadarevian (University of California, LA) illustrated in her paper, "Genetic Screening and Prospective Studies in the Early History of Medical Genetics: Practices and Controversies," genetics research was often contentious. For instance, studies of males with an extra Y-chromosome (XYY) linked that particular chromosomal abnormality to physical and behavioral traits like greater-than-average height, aggressive behavior, and mental deficiencies. Such studies became easily embroiled in nature-versus-nurture and abortion debates in the 1970s. Furthermore, they were criticized due to their use of institutionalized subjects who were not informed of their status as research subjects.

As genetics research proliferated in the second half of the twentieth century, it often resulted in new understandings of disease. Susan Lindee's (University of Pennsylvania) paper, "Before the Gene: LeRoy Matthews and the Cleveland Comprehensive Treatment Program, 1957-61," argued that Cystic Fibrosis (CF) was understood as a hereditary disease for decades prior to the 1989 discovery of the gene that causes the disease. Genetics helped transform CF from a disease that, in the 1940s, had a life expectancy of 5 years, to one that, in 2006, had a life expectancy of 36 years. However, the role of genetics in that transformation stemmed more from diagnostics than from therapy. Indeed, treatment remained modeled on the Cleveland comprehensive treatment program—a program focused on disease management and largely unaffected by advances in genetics research—but the diagnosis of CF was profoundly altered by adult carrier screening.

Another genetic disorder, Phenylketonuria (PKU), is celebrated as a success story of genetic screening. The disease, which can cause severe cognitive impairment if left untreated, can be detected by a simple blood test. In her paper, "How PKU Became a Genetic Disease," Diane Paul (University of Massachusetts at Boston) argued that widespread infant screening, conducted since the 1960s, helped to redefine PKU as a biochemical genetic disease. However, Paul qualified her argument noting that PKU is also an environmental disease. For those who inherit the PKU gene, it is the consumption of the essential amino acid phenylalanine which is contained in many foods—not the gene alone—that leads to cognitive impairment. Disease management consisting of a carefully controlled diet, therefore, factors significantly in the cognitive development of individuals affected by PKU.

While genetics research multiplied in second half of the twentieth century, counselors faced the challenge of translating new knowledge into clinical practice. Alexandra Stern (University of Michigan) explored the rise of non-directive, client-centered genetic counseling in her paper, "Between the Clinic and the Couch: Genetic Counseling and Human Genetics." Tracing the history of practitioners such as Carl Rogers and Sheldon Reed, Stern argued that the goal of achieving patient autonomy helped to put the "humanness" in genetic counseling. Beyond that, the client-centered approach that came to dominate genetic counseling in the latter half of the twentieth century marked a shift away from eugenics as a tradition that had been concerned with future populations, to a tradition more concerned with the fate of individuals and their offspring.

As a whole, this session examined the contours of a history that evolved throughout the twentieth century, but was notably defined by the establishment of medical genetics clinics in 1940s, an expansion of genetics research starting in the 1950s, and a structural revolution in clinical practice in the 1960s. Each of these scholars was superb in their treatment of various developments in the history of medical genetics. They contributed a careful analysis of detail while engaging with broad themes such as ethics in research and clinical care, the relationship between medical genetics and other fields of research/medical practice, and the role of research in shaping clinical practice.

Katherine Zwicker, PhD (University of Alberta)

Towards Dolly

Towards Dolly: Edinburgh, Roslin and the Birth of Modern Genetics
A Wellcome Trust funded project

The project 'Towards Dolly: Edinburgh, Roslin and the Birth of Modern Genetics' is currently well underway at Edinburgh University Library Special Collections. This project, funded by the Wellcome Trust's Research Resources in Medical History scheme, will catalogue and preserve the archival records of the Roslin Institute as well as the University's Institute of Animal Genetics, the papers of embryologist and geneticist Conrad Hal Waddington (1905-1975) and zoologist James Cossar Ewart (1851-1933).

Kristy Davis, Rare Books Cataloguer, and myself as Project Archivist, have been appointed to catalogue the records and printed collections. Kristy's work will see her catalogue a wide variety of material: from the many thousands of offprints which were held by the Roslin Institute (of Dolly the Sheep fame) and its predecessor bodies, to the 4,000 glass positive slides from the early 1900s, which depict scenes from around the world as well as prize winning animals from breeding competitions. Although, as one would expect, most of the material dates from the twentieth century onwards, the earliest item in the collection is a rare 16th century Italian book about horse breeding.

Walton, Thompson, Kammerer, Hogben, Fell, Crew, Cytovich - 1924

J.C Ewart with Burchell's zebra c.1900

The archival records afford us a window onto key individuals at a ground breaking period in scientific history. The papers of Waddington, which I am currently cataloguing, reveal the interdisciplinary potential of science and genetics. Waddington was not only interested in the applications of genetics to the art and architecture worlds, he was also committed to exploring how scientific advances come with certain responsibilities. His numerous files of correspondence reveal the sheer number and scope of societies and organisations with which he was associated, many of them concerned with the environment, the future of the world and man's place in it. In fact, at the time of his sudden death in 1975, Waddington was in the process of establishing a School of the Man Made Future in Edinburgh, proposed as an extra-curricular undergraduate teaching programme designed to educate students in philosophy and sociology and encourage them to analyse their roles in society.

Later on in the project I will begin cataloguing the archives of another fascinating figure: that of zoologist James Cossar Ewart (1851-1933), described by geneticist Forbes Robertson as 'the first experimental animal breeder since Darwin'. Born in Penicuik, just outside Edinburgh, Ewart's famous Penycuik Experiments of 1899 focused largely on the cross-breeding of horses and zebras. Whilst holding the Chair of Natural History at Edinburgh University, Ewart instituted new lectureships in embryology, invertebrate biology and genetics – his papers therefore allow us to see the first crucial strands of genetics in Edinburgh unfolding before our eyes.

One vital facet of these collections is the insight they give into Edinburgh's crucial place in the development of animal genetics. Edinburgh is fortunate in being surrounded by a spacious amount of land and

countryside which over the years has proved invaluable for this particular area of science. Most recently, the Roslin Institute, housed in the picturesque village of Roslin outside Edinburgh, changed the face of genetics forever with the cloning of Dolly the sheep. Just under a century before, J.C Ewart carried out his Penycuik Experiments on a private experimental farm, but by 1913 he was able to conduct research on land rented by Edinburgh University. The Department of Research in Animal Breeding, established in 1920 with F.A.E Crew (1886-1973) as Director, was in 1924 able to move from its inadequate accommodation in High School Yards, Edinburgh to the more spacious surroundings of the King's Building site just outside the city. Here it could boast acres of land on which to support experimental animals, something that proved invaluable when the University's Institute of Animal Genetics was opened in 1930.

The records of the Institute of Animal Genetics, which I will also catalogue later in the project, cast light on Edinburgh's beginnings as a centre for genetics research at a time when there was a tangible atmosphere of camaraderie and excitement. In 1946, Waddington was appointed Chief Geneticist of the ARC-funded National Animal Breeding and Genetics Research Organisation (NABGRO), based at the Institute (as well as holding the Chair for Genetics at the University). The Institute attracted many important figures in genetics at that time - both those who lived and worked there and of course those who stayed for a short while or a visit - and a touching memento of this survives in the form of the Institute's visitors' book.

We can only scratch the surface here of the vivid picture these records paint of the heyday of early genetics at Edinburgh. With relevance both within and beyond science, 'Towards Dolly' affords a valuable glimpse of not only Edinburgh's seminal role in the development of genetics, but also the human stories behind the science.

Until our catalogues become available online via a bespoke project website, please take a look at our project blog on: towardsdolly.wordpress.com and follow us on Twitter: @towardsdolly!

Clare Button - Towards Dolly Project Archivist

Pictures used courtesy of Edinburgh University Library Special Collections

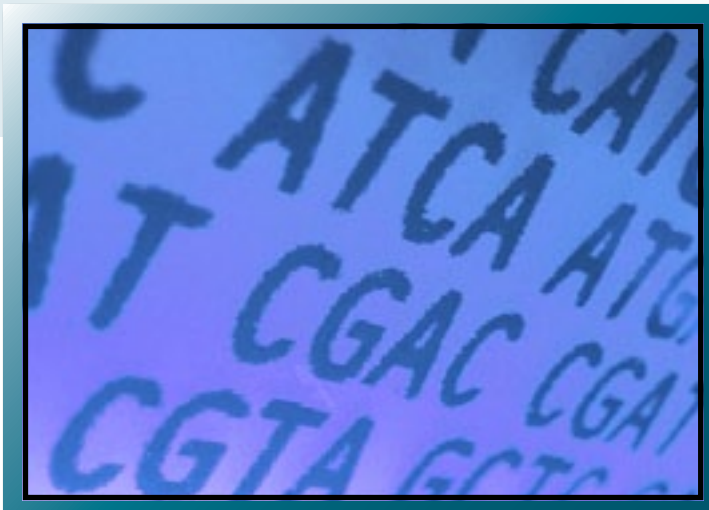
Human Genome Archive Project at the Wellcome Library

In January 2012 the Wellcome Library started the UK strand of the Human Genome Archive Project. The main aim of this project is to ensure the long-term preservation of archive material produced during the Human Genome Project (HGP).

This project is just part of a broader international plan to secure the historical legacy of an important scientific project. Following an initial meeting held at Cold Spring Harbor Laboratory in June 2009, work has been taking place in several countries.

This Wellcome Library project sees the start of detailed work in the UK, where key archive material will be identified and surveyed regardless of whether it is in hard-copy or electronic (born-digital) format.

The early months of the project have involved researching



DNA Sequence
Wellcome Images

the individuals and organisations who contributed to the HGP and deciding on a survey methodology. The approach that we have decided on is broadly based on the Minnesota Method of archival surveying. This seemed particularly appropriate as it is designed for

proactive rather than reactive collecting and includes the analysis of both the records themselves and their creators.

There are four main stages in our surveying approach. The first is to define the scope of the survey. The date span for our project is 1977-2004; from the development of the Sanger sequencing technique to the publication of the 'gold standard' human genome in Nature. Geographically, the survey will cover UK based individuals and organisations. There will undoubtedly be many grey areas, such as careers that extend beyond the main date span or international organisations with offices in several countries. The scope is there help maintain focus, but will require flexibility.

The second stage is to analyse existing collections of material already in recognised repositories. I have searched a wide range of resources that can help locate material in UK-based archives, including the National Register of Archives and the Archives Hub, and continue to monitor these resources for new additions. This has been followed by direct approaches to repositories that might have HGP material based on their collecting policies, such as universities that were awarded genome mapping grants.

The next stage looks at the broader context in which the HGP happened and how records of this might be dispersed throughout society. This will consider a wide range of organisations, records and opinions. This area of the project shows how we are attempting to apply a documentation strategy to look at the full impact of the HGP. The records of some aspects of this broader context already have good systems in place for their care, such as governmental records which are transferred to The National Archives. Others might not have such clear paths of preservation, such as small pressure groups, but are still important to the story.

The fourth and final stage is to prioritise areas of core scientific material. Serious consideration has been given to what should fall within the scope of the project and what should be excluded. This has, to some extent, been influenced by other projects such as Saving Oxford Medicine and Towards Dolly which are already working with genetics collections. Ultimately, the main focus is the genome sequence and contributing work that made it possible. The main areas of my scientific surveying, therefore, are:

DNA Sequencing on the Human Genome Project
Wellcome Images

- Research at the Laboratory of Molecular Biology in Cambridge which saw the development of sequencing techniques, work on the model organism c elegans and the use of biological computing
- The Human Genome Mapping Project including the granting of research money and the administration of the resource centre
- The contribution of the Sanger Centre (now the Wellcome Trust Sanger Institute) to the HGP including the development of processes, equipment and bioinformatics.

Although this project is archival, ie original documents created during the HGP, I am working closely with related professionals to try to preserve other relevant material. For example I have been working with museum curators who are interested in artefacts (3D material) and librarians who are interested in grey literature (material that is not commercially published). Where appropriate, I am also considering web resources that could be preserved as part of the UK web archive. Essentially, content is the main consideration rather than format.

The methodology being used by this project is different to how scientific material has previously been approached and is challenging the criteria by which we assess material. Instead of making these decisions based on current research potential we are looking at making them based on how it documents a scientific project.

Project updates will be posted on the Wellcome Library blog: http://wellcomelibrary.blogspot.co.uk/

Jenny Shaw - Project archivist for the Human Genome Archive Project,
Wellcome Library and Wellcome Trust Sanger Institute

Wellcome Trust & CSHL Project

An update on Wellcome Trust–Cold Spring Harbor Laboratory (CSHL) Project to create an International Catalog for the History of the Human Genome Project

When listing the major scientific achievements of the 20th and 21st centuries, the Human Genome Project (HGP) is likely to be at the top of the list. Thus it is important to promote public awareness of the HGP and its impact through the first decade since its completion. The Wellcome Trust and Cold Spring Harbor Laboratory (CSHL) understand the importance of preserving the evidence (original materials) pertaining to the history of such a unique project, which has impacted science and society worldwide.

Initiated in 2009, The Wellcome Trust–CSHL project aims to create an international catalog for the history of the HGP. The specific goals of the project are to identify and prioritize HGP-related materials worldwide and establish a system to organize and disseminate information about these materials. Researchers on this project are working to locate original documents scattered throughout the world, in research institutes, in the files of government bodies and foundations, in companies, and in the scientists' own personal collections. Documents in different formats include accounts of major meetings, laboratory notes, communication in the form of letters and e-mails, photos and videos, and digital documents.

The main goal of this comprehensive project is to lay the foundation for future historical and social research on the HGP. The identified materials will illustrate the significant collaborations and events that occurred over the course of the HGP. An important ancillary contribution of the project is to encourage the preservation of materials by individuals and institutions. The primary output from the project will be an online, open access, searchable catalog of materials relating to the HGP. In addition to listing what materials are where and by whom they are held, the catalog will include information on the accessibility of the original materials.

Information and updates about this project were presented at the Fourth International Workshop on Genetics, History and Medicine in Gothenborg, Sweden. Then, in May 2011, I was a panel member at a session entitled, "Collecting the Genome," held at the Department of History and Philosophy of Science, Cambridge University, UK. Most recently, in May 2012, at an international meeting held at the Banbury Center, Cold Spring Harbor Laboratory, New York, USA, we discussed the International Catalog for the History of the HGP and related projects on the HGP. At that meeting, which was sponsored by the Alfred P. Sloan Foundation, various projects were discussed, such as a scholarly, multi-authored book on the history of the HGP; an ebook or mobile app for educational use; and a documentary film. Currently, in addition to further planning for these projects, further funding is being sought in the U.S., Europe, and Asia.

In this update, I am pleased to report that the NIH/ National Human Genome Research Institute (NHGRI) has hired an archivist for this project. The archivist initiated a comprehensive survey of sources and materials in the UK in April 2012. This work is scheduled to be completed in March 2013. At CSHL, an HGP project researcher prepared a comprehensive list of people, institutions, and technologies associated with the HGP. In addition, the researcher has initiated a small-scale survey of sources and materials, so as to gain a better sense of what sources are available in the U.S. and the range of materials to be cataloged. This will enable planning for subsequent expansion of the project and to begin designing the necessary database.

With the success of this project, more comprehensive records and information will be available on the history of this unique international achievement, which will be presented for future generations through different formats, such as print or multimedia publications, websites, blogs, etc.

I also would like to mention the ongoing CSHL Oral History Project (see http://library.cshl.edu/oralhistory/), which we initiated in 2000. In this project, we have collected many oral history interviews on genome research and the HGP. For example, Lee Hood gave an oral history interview in 2003, in which he related stories about his involvement in the HGP. In another oral history interview in 2010, he enumerated the major transformational impacts of the HGP on science, medicine, and society (http://youtu.be/PnpEqHDczNk).

Besides the Genetics and Medicine Historical Network (GenMedHist; http://www.genmedhist.org/), other current projects around the world related to the history and impact of the HGP include:

- Smithsonian NHGRI Genome Exhibition
http://www.genome.gov/Smithsonian/
- Wellcome Trust Modern Genetics and Its Foundations Digitisation Project
http://library.wellcome.ac.uk/doc_WTX057852.html
- Genetics Society of America - Conversations in Genetics
http://www.genestory.org/
- UCLA – Johns Hopkins University Oral History of Human Genetics Project
http://ohhgp.pendari.com/

It is my hope that by posting this update in the GenMedHist Newsletter, all of the readers will spread the news about our project to those who are interested in learning more about it, and those who might be able to help us identify or locate materials relating to the HGP. We also will keep in touch with and provide similar updates to GenMedHist and the other organizations listed above, so as to ensure that we are all working together, sharing information, and avoiding major duplications of effort.

Mila Pollack Executive Director
CSHL Library and Archive, Leader of the project on History of HGP

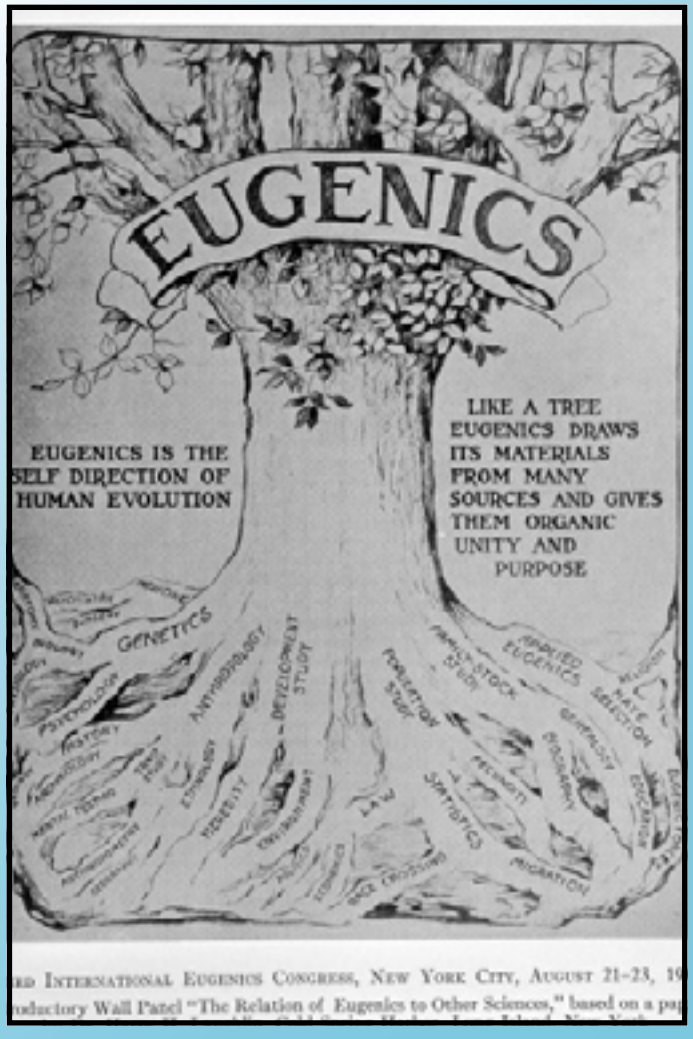
Foundations of Modern Genetics

A new on-line resource for advanced research in the history of science

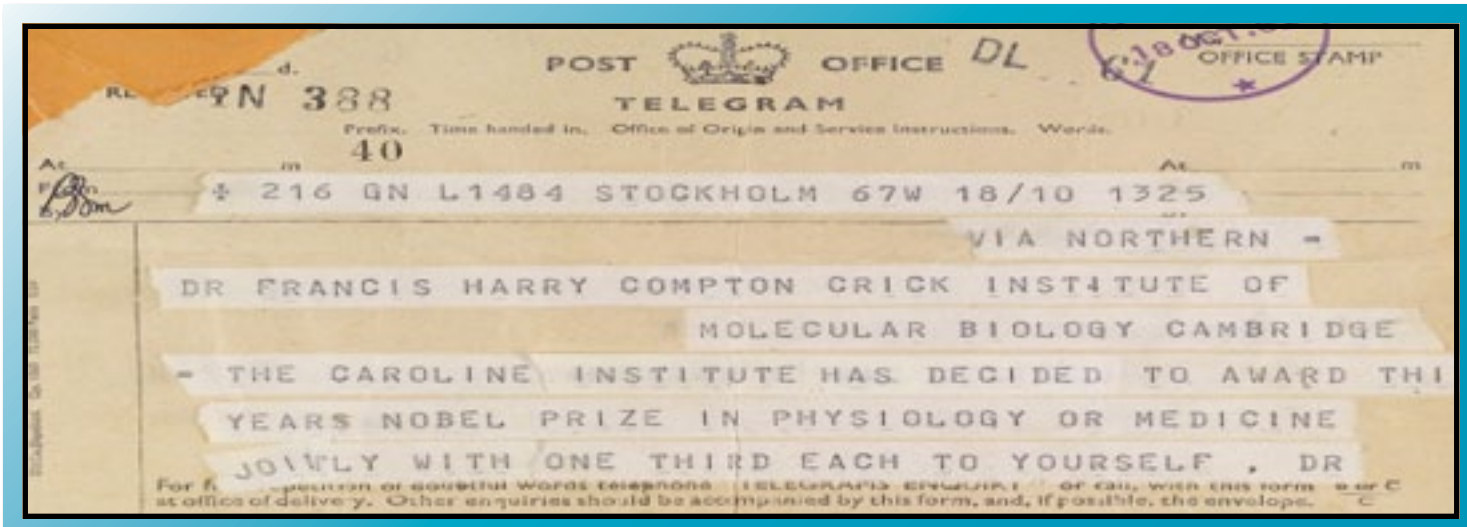
The Wellcome Library in London is developing an on-line resource for the study of the history of genetics in the twentieth century. This resource – with the working title 'Foundations of Modern Genetics' - brings together large quantities of archival documentation from the Wellcome's own and partner collections, together with several thousand printed works in the field. The archival collections include those of Francis Crick and the Eugenics Society, held in the Wellcome Library, of James Watson and Sydney Brenner at Cold Spring Harbor Laboratory, and those of JBS Haldane and Lionel Penrose at University College London.

We aim to launch the website in the Spring of 2013 to coincide with the sixtieth anniversary of the Crick and Watson paper announcing the structure of DNA and the tenth anniversary of publication of the first draft of the human genome.

This is a groundbreaking project: as far as we know there is no other resource worldwide providing such large quantities of original twentieth-century unpublished documentation on-line. Our aim is to create



Third International Eugenics Conference Poster
Wellcome Images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VIA NORTHERN -

DR FRANCIS HARRY COMPTON CRICK INSTITUTE OF

MOLECULAR BIOLOGY CAMBRIDGE

- THE CAROLINE INSTITUTE HAS DECIDED TO AWARD THI

YEARS NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

JOINTLY WITH ONE THIRD EACH TO YOURSELF , DR

Telegram from the papers of Francis Crick
Wellcome Images

a virtual archive that not only provides remote access to hundreds of thousands of surrogate pages of text, but brings together widely dispersed content for exploration in a single dedicated site.

Like most research libraries and archives repositories, the Wellcome Library has been planning for several years to digitise quantities of its unique holdings and provide remote access to the digitised content over the Web. Among the many challenges that such plans present, perhaps the most fundamental is the decision what to digitise, or where to start - with almost limitless potential in the holdings but limited resources what do we prioritise?

Some institutions have chosen to select their most popular collections, others those for which they can obtain commercial funding (which are often the same of course). The Wellcome Library has opted for a thematic approach: we aim to digitise a substantial proportion of our holdings by looking at various broad subject areas and creating integrated online resources to support research and discovery in those fields. Since digitisation and the internet enable the creation of virtual online archives by providing a single point of access to widely dispersed content, we intend to integrate relevant content from the holdings of other institutions into the online resources that we eventually create.

'Foundations of Modern Genetics' is the first of these themes. It is an obvious choice for us in many ways, not only because of the richness of the documentary content available among our library holdings but also because of the central role played by our parent body the Wellcome Trust in funding genetics research in the UK over the past thirty years. The resource will focus on the development of the science of biological inheritance from the later 19th century onwards, and the growing understanding of its role in human health and disease during the 20th century. Arguably, this will represent the fundamental meta-narrative of modern medicine; the gradual integration of genetics into the clinic. Content relevant to this theme ranges from relatively early documentation on the basic science of heredity and on the study of inherited diseases, to material on the elucidation of the molecular basis of inheritance in the mid-20th century and the subsequent development of genomics.

The collections from the Wellcome Library that are included are as follows:

- the papers of Francis Crick (1916-2004), molecular biologist
- the notebooks of Fred Sanger (b.1918), biochemist
- the papers of Arthur Mourant (1904-1994), haematologist and geneticist
- the papers of Hans Greuneberg (1907-1982), geneticist
- the records of the MRC Blood Group Unit , 1935-95.

This material forms a core of documentation on some of the most important research on the theoretical underpinnings of the biology of inheritance, on genetics and gene sequencing in post-war Britain. To this we have added the records and papers of the following:

- The Eugenics Society, 1863-2008
- Carlos Paton Blacker (1895-1975), a psychiatrist who served as Secretary of the Eugenics Society

- Robert Race (1907-1984) and Ruth Sanger (1918-2001), serologists
- Sir Peter Medawar (1915-1987), biologist
- Dame Honor Fell (1900-1980), medical scientist.

Although more loosely connected with the theme, this material helps to document the contemporary scientific, intellectual and institutional context in which genetics and allied research took place. The papers of Medawar and Fell in particular include voluminous correspondence with a host of medical scientists of the second half of the 20th century.

The following externally held archival collections are being added to the resource:

- Papers of Rosalind Franklin (1920-1958), biophysicist (Churchill Archives Centre Cambridge)
- Papers of Maurice Wilkins (1916-2004), physicist and molecular biologist (Kings College London)
- Papers of James Watson (b.1928) and Sydney Brenner (b.1927), molecular biologists (Cold Spring Harbor Laboratory)
- Papers of JBS Haldane (1892-1964), geneticist and Lionel Penrose (1899-1972), psychiatrist and medical geneticist (University College London)
- Papers of Guido Pontecorvo (1907-1999), James Renwick (1926-1994), and Ferguson-Smith (b.1931), geneticists (Glasgow University)

The complementarity of some of these collections with Wellcome-held content is obvious, but in other cases the selection is somewhat random, having been driven largely by the availability of collections for imaging and the willingness of partners to collaborate. But we hope that the integration of externally-held documentation into the resource will prove the value to researchers of combining dispersed content in this way * and provide us with useful lessons and tools for integrating new material more easily in future. As it is, we are extremely grateful to our various institutional partners for allowing us to use their collections in this way.

When the resource goes public next year it will accessible via a dedicated portal on the Wellcome Library's website, accompanied by appropriate descriptive commentary and features such as a timeline that will no doubt be of more interest to the lay than the specialist researcher. We look forward to evaluating use of the resource by the academic research community and the non-specialist audience alike, and in due course to improving and adapting the resource in response to feedback. We do indeed live in interesting times.

Richard Aspin, Wellcome Library

Archive Project at the John Innes Centre, Norwich

Funded by an award from the Wellcome Trust's Research Resources in Medical History, the John Innes Centre began a 15 month project in March 2012 to catalogue the manuscript collections of two of the early Directors of the John Innes Horticultural Institution. These are the archives of William Bateson and Cyril Darlington, unquestionably two of the great figures of 20th century genetics science. As well creating on-line catalogues and indexes using the leading archival software 'CALM', the project is enabling conservation work to be carried out on damaged and fragile items. Identification of material for possible future digitisation is also an objective.

Work is well underway on the Bateson archive which, being richer in correspondence than the Darlington archive, will take longer to describe and index. The material consists of all Bateson's manuscript papers at the JIHI, Merton, which were not taken by his wife, Beatrice, for writing a memoir. The papers removed by Beatrice were eventually deposited at Cambridge University Library in the 1970s. The Cambridge Bateson archive was also the beneficiary of a Wellcome Trust grant last year by its inclusion in a genetics archives project at Cardiff University. This collection is notable for possessing the field notebooks from Bateson's tour of the Asian Steppe in 1886-1887, a large quantity of family correspondence, and Bateson's famous draft letter to Adam Sidgwick coining the term 'genetics'.

The John Innes Bateson collection contains a very substantial record of his investigation of Mendel's

theories, both before and after he became Director of the JIHI. As well as experimental plant breeding, his exceptional range of interests covered studies of poultry, cattle, butterflies and a number of human hereditary diseases, especially those of the eyes. Bateson's correspondents include many prominent botanists, zoologists, biologists, geneticists and medical professionals. Among them are E. Baur, R.H. Biffen, C.C. Hurst, T.H. Morgan, J.S. Huxley and N.I. Vavilov, as well as numerous horticulturalists and breeders of cattle and birds. There are nine of his scientific notebooks, a large quantity of manuscript notes which are often found with correspondence, photographs and occasional specimens of flowers and animal fur in original envelopes. The arrangement of the scientific correspondence and papers is by topic, incorporating existing arrangements by Bateson, his biographer A.G. Cock and a previous JIC archivist.

Papers appertaining to the foundation, running and staffing of the John Innes Horticultural Institution during Bateson's Directorship (1910-1926) are well represented in the archive. Bateson's correspondence with Sir David Prain and Sir John Farmer documents the discussions leading to the foundation of the Institution, Bateson's ideas and plans, and the beginning of his work at Merton. Further Institution correspondence also covers a range of topics including planned developments after World War One. Among other material catalogued so far are drafts etc for some of Bateson's public lectures and addresses, papers relating to his 1925 visit to Leningrad for a meeting of the Russian Academy of Sciences, and sets of his manuscript University of Cambridge lecture notes (for teaching), dating from 1897-c.1906. The latter complement similar sets of notes in the Cambridge Bateson archive which also date from 1897.

Both the Bateson and Darlington archives, especially the latter, contain sets of glass negatives. The rest of Darlington's papers consist largely of drafts of his books including The Elements of Genetics (1949), Facts of Life (1950-1953) and The Little Universe of Man (1976). There are also administrative correspondence and papers, some of which cover the Institution's move from Merton to Brayfordbury in 1950, some scientific correspondence, photographs and audio material.

The Project will result in greatly improved finding aids for researchers to these valuable collections. Not only do they shed light on studies of heredity, cytology and genetics spanning nearly a century, but also on the lives of two brilliant and often controversial scientists whose powers of thought extended well beyond their specialist fields.

A blog for the Project has been established at the following address: http://archives.jic.ac.uk

Simon Coleman, Archivist, John Innes Centre Library and Archive

Biland

Developing a web-application for comparative historical data-mining in public media from different countries

Biland is a data-mining tool being developed as a digital humanities application for what is called the history of mentalities. Contrary to the history of explicated ideas of certain people or within certain contexts, the history of mentalities searches for latent ideas, for tacit knowledge, for beliefs, standards or morals. It is not a particularly easy form of historical research. The ideas of scientists or other thinkers can be found in what they've written or said. How, however, can we find the latent ideas of people who didn't leave any written legacy, or who perhaps weren't even aware of the knowledge behind their beliefs? Biland is being built by a team of historians and computer experts to do exactly this. It is able to give us glimpses of hidden debates. It makes clear, in other words, those cultural, day-to-day contexts in which certain knowledge—in our case knowledge of genetics and eugenics—was employed, explicitly or not.

What makes genetics and eugenics so interesting in this context is that they provide exactly the kind of hidden debates our tool is designed to find. It is our belief that genetic and eugenic thinking had a much more

Picture 1. (see key)

widespread impact on Western culture and societies before the Second World War than is suggested when examining racial eugenics alone. In the Netherlands, for example, the official eugenics-movement has always been fairly marginal. This means that "hard-line" eugenics-supporters were not in the position to monopolize public discourse and to influence public policy. Does the absence of eugenic practices suggest that eugenic thinking was absent altogether in the Netherlands? We believe this was not the case. Many cultural domains and public discourses can be found that did not openly flirt with hard-line genetics, but still contained notions of genetic and eugenic thinking. Based on the international literature as well as present-day discussions, one might expect to find such examples in debates on education, housing projects, the growing medical interest in sports, the circus, or gendered questions like what it means to be a good mother. However, one of the most interesting aspects of the digital tool we are developing is that it is meant to give us glimpses of additional contexts influenced by genetics and eugenics that we had not originally considered.

We aim to look how genetic and eugenic thinking in Dutch public discourses was disseminated. What were the political and racial connotations of the arguments that circulated in newspapers and how did they become manifest in different domains? These are the main research questions that give direction to this project. In this way, we aim to contribute to our knowledge about the scope of eugenic thinking in culture before the Second World War. The research project also aims to present a comparison between German and Dutch public discourses in the interwar period to support our thesis. In Germany eugenic thinking became an integral part of an all-enveloping state propaganda machine. The comparative perspective in this project enables us to address the important question about how, when, and to what extent discourses about heredity, genetics and eugenics in Germany began to differentiate from the Netherlands.

Biland is best seen as a smart search engine. The starting point for this project has been the open-source software infrastructure xTAS (http://xtas.net) developed by the Intelligent Systems Lab at the University of Amsterdam. Building on this infrastructure a CLARIN-supported web-application for historical sentiment mining in public media has been built under supervision of historian Stephen Snelders.

In the Biland project, we aim to make the tool useful for bilingual research and to improve its tools of analysis. The search engine functions to search through the digital newspaper collection of the Royal Library in The Hague, consisting of around nine million digitized pages by the end of 2012. Until now, one could only search in Dutch. However, the Staatsbibliothek zu Berlin has granted us access to three of its digitized historical newspapers, the Amtspresse Preussens, to make the tool useful for searching through German texts. By analyzing the results we get from both datasets, we hope to compare

discourses about heredity, genetics and eugenics in these two countries. It was the news media, after all, that formed a public forum for shaping and reshaping the meanings of eugenics and human heredity in a broad spectrum of discourses within various contexts. Also, the use of news media as the main type of primary sources enables us to take into account the diversity and fluidity of public discourses around heredity and eugenics.

One of the most innovative aspects of the tool, as far as methodology is concerned, is its ability to do research on hidden debates. The tool enables searching on combinations of keywords that in itself do not necessarily refer to eugenics, but do imply eugenic thinking, for example: 'ancestry', 'lineage', 'descent', 'stock', 'reproduction', 'regulation', 'selection', 'pure'/'purity', 'progression', 'evolvement', 'deterioration', 'depravation', 'isolation', 'segregation' – in combination with keywords from social or cultural domains: sports, religion, and the like. In this way one can get an idea not of explicit discussions about eugenics, but of mentalities and implicit notions influenced by hereditary and eugenic thinking within certain debates.

The tool, which is still in a developmental phase, works as follows. The mentioned keywords are made into queries, for example 'civilization' and 'generation'. These queries generate a number of hits. A quantitative analysis of these hits can be made in a number of ways:

- the number of hits, naturally, says something about the occurrence of certain words or combinations of words used in a certain period of time;

Picture 2. (see key)

Picture 3. (see key)

- a quantitative analysis of the sources used can give insight into which social context to situate the occurrence of words;
- a word cloud generates the context within which certain words or combinations of words were used: our tool is able to generate word clouds from singular articles, but also from the results of queries – in other words, from hundreds of articles together;
- sentiments can be highlighted within the word cloud and within articles. One can, in other words, see which words in the cloud had a negative connotation and which ones a positive;
- we are working on Named Entity Recognition, which generates a word cloud consisting of words in the context of the keywords that are recognized as certain types of names: geographical names, names of persons or of institutions. Through the use of this tool we will be able to place the occurrence of certain ideas or debates within a geographical context, or to connect them to various persons or organizations;

- lastly, the temporal distribution visualization allows historians to discover patterns in documents' publication dates. To enable quick recognition of atypical patterns, bursts within the histogram—time periods where significantly more documents were published compared to periods around that burst—are highlighted. Clicking on a burst yields a word cloud of that burst alone and a list of documents contained within that burst. This allows the historian to get an in-depth understanding of what each burst is about.

Clearly, Biland does not replace traditional historical workmanship. It is meant as a heuristic tool that, ideally, brings the historian new ideas. Insights that would not have come to light through reading a number of articles, but that only the analysis of hundreds of them – in ways I just mentioned as well as in other ones – is able to bring to the front. In this way, it is our hope that our digital research method makes further research worthwhile. This specific project focuses on the period until the Second World War, but the tool can be, particularly, made useful to bring continuities in mentalities to light and most importantly can help us to quantify trends in the history of mentalities. Did the Second World War really form a schism in eugenic thinking? Or did old mentalities persevere? It would, for example, be very interesting to elaborate this question with the help of this digital tool. For more information please visit www.biland.nl. Everyone with questions or suggestions is cordially invited to email me (P.Huijnen@uu.nl).

Key to Pictures:

1. Screenshot word cloud and timeline query 'sports AND heredity'
2. Cartoon that indicates the occurrence of a diffuse kind of 'belief' in genetics in culture. The text reads: '"Do you belief in heredity?" "Absolutely, that's how I've gained my fortune."'
3. Another cartoon that indicates the cultural preoccupancy with genetics. The caption says 'Genetics' and the description: 'Where does genetics stand after the historical case above?'

Dr. Pim Huijnen & Prof. Dr. Toine Pieters, Utrecht University

Makers of Modern Biomedicine

The History of Modern Biomedicine Research Group, based at Queen Mary, University of London, continue to build upon their work documenting the recent history of clinical genetics research and practice.

A five year Strategic Award from the Wellcome Trust has enabled the group, headed by Professor of the History of Modern Medical Sciences Tilli Tansey, to embark upon a new project, entitled 'Makers of Modern Biomedicine'.

Historical research into post-war clinical genetics is one of the central planks of the new grant. Outputs in terms of digital media will be available to download, completely free of charge, from the group's website: http://www.history.qmul.ac.uk/research/modbiomed. Publications will build upon the success of previous Wellcome Witnesses to Twentieth Century Medicine volumes:

Genetic Testing (http://www.history.qmul.ac.uk/research/modbiomed/wellcome_witnesses/volume17)

Cystic Fibrosis (http://www.history.qmul.ac.uk/research/modbiomed/wellcome_witnesses/volume20)

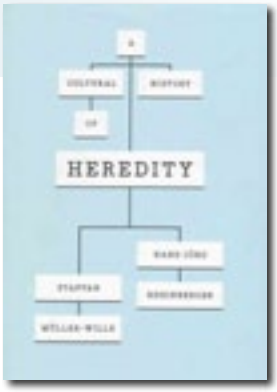
Clinical Genetics in Britain: Origins and Development (http://www.history.qmul.ac.uk/research/modbiomed/wellcome_witnesses/volume39)

A brand new volume, 'Cancer Genetics', is due for publication in Summer 2013, with further volumes to follow.

http://www.history.qmul.ac.uk/research/modbiomed

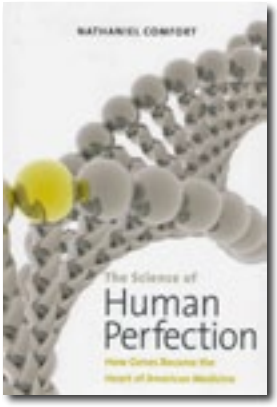
http://www.facebook.com/HistModBioMed

On the bookshelf



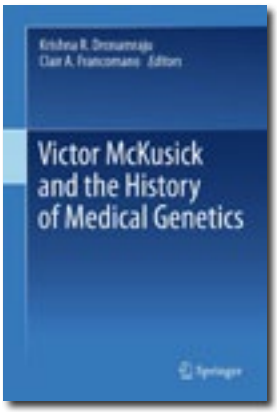
1. A Cultural History of Human Heredity

Müller-Wille S and Rheinberger H-J. (2012). A Cultural History of Human Heredity. Chicago.



2. The Science of Human Perfection

Comfort N. (2012). The Science of Human Perfection: How Genes Became the Heart of American Medicine. Yale.



3. Victor McKusick and the History of Medical Genetics

Dronamraju K and Francomano C Eds. (2012) Victor McKusick and the History of Medical Genetics. Springer.

4. The Cold War Politics of Genetic Research

DeJong-Lambert W (2012) The Cold War Politics of Genetic Research: An Introduction to the Lysenko Affair. Springer.

Historical Research Collaboration Offer

Experienced MD-PhD medical geneticist and historian wishes to collaborate on future research projects. Areas of interest include:

1. Genetics and medicine in the US 18-20th centuries
2. Genetics and medicine in the UK 16-20th centuries
3. History of genetics 18-20th centuries
4. German eugenics program 1933-1945

For further information, please contact:

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