

“Pasts, Presents and Futures of Medical Regeneration”

Workshop I: Histories of Medical Regeneration

Report

The first of three workshops organised as part of the “Pasts, Presents and Futures of Medical Regeneration” project took place on Tuesday 19th January at the Henry Moore Institute, Leeds. The event, supported by a Wellcome Trust Seed Award grant, brought together researchers and clinicians from a wide variety of disciplines, including history of medicine, cultural studies, literature, philosophy, sociology and biomedicine. The session was designed to facilitate collaborative discussions surrounding the “Histories of Medical Regeneration” and the ways in which this historiography can inform understanding of the forms, possibilities, limitations, agendas and ethics of regenerating the human body in a contemporary context.

The morning opened with an introduction from principal investigator Dr James Stark, who gave the background to the project and its origins in his own research. Dr Stark outlined the definitional scope of the term “regeneration”, both in the generalised sense of a “renewal”, “rebirth” or “restoration”, and as a specific biomedical term which describes “the formation of new tissue of cells; the natural replacement or repair of a lost or damaged part, organ, etc.”, or “the formation of a new individual from part of an organism, often as a form of asexual reproduction.” (OED). Dr Stark suggested a number of key questions to be considered in examining the historical forms of regeneration as antecedents to regenerative medicine today which would recur throughout the day’s presentations and discussions. These included: understanding public perception of, and demand for, regenerating the body; the features of medical regeneration as they manifest in popular science and popular culture; and the role and agendas of commercial interests.

The following session comprised round-table introductions, in which participants were invited to reflect on the intersections of their work with the theme of medical regeneration, and articulate the most pressing research questions in their fields at the current moment. Lucy Santos outlined her research into the market for rejuvenating beauty products containing radium at the turn of the twentieth century, and noted the difficulties of locating relevant archival materials pertaining to the companies who developed these. Professor Stuart Forbes spoke to the challenges of finding efficacious therapies and minimising the risks of clinical trials, observing that failed trials can have a majorly negative impact on the field of regenerative medicine and its funding. Dr Stephen Curtis engaged with discourses on the body and technology from a cultural perspective, citing fantasies of “science fictional regeneration” in a range of media which configure corporeal transformations as normative. Professor Chris

Gilleard discussed perceptions of what constitutes “normal” and “abnormal” aging, pointing out that medical interventions often converge on the latter, but that the former is increasingly governed by a moral imperative – encouraged by the state and the market – to maintain and regenerate our own bodies from youth through to old age. Professor Paul Higgs suggested that governments already faced with the challenges of an aging population might also reasonably be concerned at the prospect of success in medical regeneration. He emphasised the need to consider the psychological, as well as physical, aspects of aging and regeneration, and dementia specifically. He also raised questions surrounding disability and quality of life in relation to regeneration, citing studies which have shown that children who have received liver transplants often require a second transplant, along with a lifetime need for immunosuppressants. Dr Cheryl Lancaster then drew on her research into the biology and history of stem cells. She described the ways in which induced pluripotent stem cells can be generated directly from adult cells, and stated that the implications of research into “stemness” extend to the fields of embryology and genetics.

Lesley Steinitz spoke about the industrial manufacture of health foods around 1900, and the impact of their advertising and marketing on consumers. She pointed out the gendered nature of commercial strategies which relied on ideals of physical beauty and youthful vigour, and their contemporary equivalents. Dr Bill MacLehose contributed perspectives on medieval medicine and natural philosophy, including the search for an alchemical process to prolong life or restore youth, pointing out that these two distinct phenomena are often conflated. He added that digestion and sleep might be thought of as “natural” rather than “artificial” forms of physical regeneration. Michael Guida picked up the thread of discussion on “natural” regeneration in outlining his research into pastoral therapies and sound therapies in the early twentieth century, particularly as they were used to rehabilitate the physically and mentally degenerated bodies of the First World War. Karen Jent resumed the topic of translational medicine initially raised by Professor Forbes in outlining her work on the processes by which stem cell research is developed from a laboratory context into clinical practice, citing the challenges of autoimmunity in particular. Professor Andrew Webster continued on the topic of translational medicine, outlining his work into the emergence of new areas in clinical medicine and significant variations in the development of regenerative medicine globally.

In the final morning session, Irish Research Council and Marie Curie Postdoctoral Fellow Dr Luna Dolezal presented to the group on the topic of “Super Longevity: Considering Transhumanist Discourses”. Whilst repairing damage is one of the most important goals of regenerative medicine, in recent years, transhumanist thought has focused on the possibilities this affords for the individual body and the future of humanity. Dr Dolezal opened with a short video released by the British Institute of Posthuman Studies (available at www.biops.co.uk) which outlines a vision for human life characterised by three dominant areas of transhumanist thought: “super-longevity”, “super-intelligence” and “super-wellbeing”. Transhumanism conceives of the body as a manipulable entity open to intervention, and sees “morphological freedom” – the proposed civil right of a person to modify their body through the use of medical technologies – as a prerequisite for this. This is part of a broader “culture of reinvention” (Anthony Elliott, 2013) in which individuals are compelled, or even coerced, into

physical self-improvement Dr Dolezal strongly emphasised the ideological frameworks which underscore such thinking, and the ways in which these discourses increasingly play out in medical contexts. She noted that this model of aging as pathology, rather than as a natural physiological process, corresponds with neoliberal agendas of human efficiency and productivity.

During the afternoon, David Boyd Hancock gave a broad chronological overview of aging from the early modern period to the present day in his presentation titled “A Short History of Life and Death”. This emphasised historical efforts to achieve longevity through alchemy, diet and blood transfusions, and the endurance of philosophical and scientific enquiry into life, senescence and death. David also touched on the racial dimensions of regeneration, citing Darwin’s observation in *Descent of Man* (1877) that “a want of care, or care wrongly directed, leads to the degeneration of the race”, together with the eugenics movement in the interwar period.

Following this, project research assistant Catherine Oakley focused on the late nineteenth and early twentieth centuries in her presentation titled “Medical-Cultural Histories of Regeneration: A Comparative Approach”. This drew on her doctoral research into widespread preoccupation throughout this period in Britain and the U.S. with the body’s vital energies, expressed in a range of materials including: medical texts, popular science periodicals, advertising ephemera, literary fiction and silent film. She outlined her own project as a particular case-study in researching medical and cultural histories of regeneration, and invited participants to reflect on the kinds of approaches and methodologies they might productively employ in bringing historical perspectives to bear on contemporary contexts. Group discussions afterwards converged on regenerative solutions in the medical marketplace (e.g. cosmetic surgery) and the question of regulation. They also engaged with class issues: would future medico-commercial regenerative innovations be available only to those who could afford them?

The closing round-table discussion synthesised the day’s rich and thought-provoking conversations and offered an opportunity to plan collaboratively for subsequent workshops. It was agreed that further thought should be given to the scope and definition of the terms “regeneration”, “enhancement” and “rejuvenation”, and their associated practices. Distinguishing between regeneration of physiological function and biological material may also prove helpful. The difference between preventative strategies undertaken throughout the life span (e.g. diet, exercise) and reparative practices largely pertaining to later life, are also worthy of deeper reflection. Suggestions were made for more sustained explorations surrounding gender, disability and psychology as they relate to medical regeneration. Future workshops could invite perspectives from a practitioner working in regenerative medicine or music therapy, a cosmetic company representative, and/or scholars working in the fields of media studies and anthropology.

The second workshop, titled “Medical Regeneration: Innovation and Imagination”, will take place on April 4th and April 5th, 2016.

Questions and feedback on the workshop or the project in general should be addressed to PI Dr James Stark (J.F.Stark@leeds.ac.uk) or Research Assistant Catherine Oakley (C.M.C.Oakley@leeds.ac.uk).

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