Human subject research

Erika Dyck and Larry Stewart (eds.): The Uses of Human Experiment: Perspectives from the 17th to the 20th Century Leiden, Brill, 2016, xii+297pp, €117 HB

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The Uses of Human Experiment explores the places and spaces in which the human body has been subject to experiment from the seventeenth to the twentieth century. Erika Dyck and Larry Stewart frame this collection in light of Michel Foucault’s history of the body, medicine, and the natural sciences, and thus at stake, we are told, is the making of the subject through a process that required its own objectification.

In the process, Anita Guerrini argues that those who were considered marginal or monstrous were often treated in ways that would have been unthinkable for those who more neatly fit recognized categories. Her case in point is the investigation of hermaphroditism. Physicians and anatomists walked a fine line between professionalism and prurience. The ambiguity of the hermaphrodite body allowed anatomists and physicians leeway to perform invasive and painful examinations that would have been judged indecent if performed on man or woman. The location made the difference, and those who might be displayed at public fayres to satisfy a gawking public might be observed and more intimately investigated, for a higher fee, in the coffeehouses that catered to connoisseurs, philosophers, and medical men. Indeed, it is clear that the depth of investigation that the anatomist James Douglas inflicted upon the hermaphrodite Constantia Boon was limited only by the fact that she was a living being!

The vital spark that divided the living from the dead was arguably the Holy Grail of scientific investigation, and Rob Iliffe charts the extension of these inquiries from the bodies and severed limbs of frogs to the recently executed. Even after the passage of the Murder Act in 1752, the number of available bodies remained limited in England. It is unsurprising, therefore, that the cutting edge of such investigations, so to speak, proliferated in revolutionary France. Such investigations informed discussion of the ethics of the guillotine, as debate remained whether consciousness persisted in a severed head and whether pain was felt. The application of electricity in...
medicine laid the ground for later developments in experimental physiology; the use of shocks to treat madness and melancholy was precipitated not only by experiments on the incarcerated, but by self-experiment. The Scottish physician Richard Fowler was one of many who variously applied electric currents to their eyes, tongues or inserted conductors into their more intimate orifices in pursuit of answers to probing questions. The German naturalist Alexander von Humboldt opened up his own muscles and arteries in the course of his own electrical experimentation.

As Joan Steigerwald points out, these and other galvanic experiments promised a new technique for investigating muscle contraction, nerves, and fibers and appeared to reveal evidence of a new kind of electricity generated in organic material. Humboldt’s assistant Johann Ritter had related such phenomena to the Naturphilosophie that informed German anatomy, but Steigerwald brings her essay to bear on the cultural settings in which scientific identities were formed, offering an explanation of such self-fashioning in terms of Foucault’s conception of the discipline of the technologies of knowledge, of the bodies and populations. Electricity remains the central theme in Paola Betucci essay. An exploration of this history, she contends, reveals the extent to which those with competence in its application often lacked medical expertise, and while technology is now routine in the production of reliable medical knowledge, from the 1740s those who offered electoral therapies conducted their business on the fringes of respectable medicine.

Stewart takes up the theme of experimental science at the boundaries in his study of the politics of pneumatic chemistry. Those who echoed Joseph Priestly’s claim that experimental science was inherently democratic asserted experiment as a new epistemology. While Priestly’s followers, like the physician Thomas Beddoes, were often not above subjecting others to experiment in the name of science (notably in at least one attempt ‘to whiten the skin of a distressed negro,’ 144), Beddoes also advocated pneumatic chemistry as therapy. In doing so, Beddoes and others often struggled to distinguish themselves from quacks and showmen and stressed their use of experiment in evidence of their professional superiority. Despite such efforts, these therapies were usually only sought out as a last resort, and Beddoes quickly found that even the desperate were reluctant to become his research material. As Stewart shows, though, the researchers themselves were often among the desperate; the chemist James Watt, who had lost both a son and a daughter to consumption, turned to self-experiment regardless of the considerable risk involved.

The coverage of eighteenth-century experimentation in this volume is broad and deep, but the narrative jumps somewhat unexpectedly from 1800 to the late nineteenth century. Indeed, Elizabeth Neswald’s essay in which she considers experimental research in late nineteenth-century nutritional physiology in Germany is, surprisingly, the only essay that tackles the nineteenth century. Neswald argues that researcher–subject relationships were often more complex than we might presume; our present-day concern with ethical abuses has drawn our eye to only specific disciplines and high-profile cases. The ‘experimental turn’ in science studies reveals that less studied fields also have stories to tell. Subjects in Neswald’s story often negotiated with their investigator, and while this demands attention to the agency of the subject, Neswald also pays attention to the ways in which their bodies variously complied with or resisted the experimental process.
With Katherine Zwicker’s essay, we move twentieth-century America and the treatment and research of cancer in the 1910s and 1920s. As physicians collaborated with physicists in an effort to develop radiation therapies, their shared commitment to experimental medicine made it easy for patients unwittingly to be made research subjects.

The final three essays tackle human subject research in the context of eugenics. While the Tuskegee syphilis experiment is well known, Paul A. Lombardo’s essay provides a new perspective on scientific research at the Tuskegee Institute. Students were subject to anthropometric measurement across a twelve-year longitudinal study planned by the famed eugenicist Charles Davenport and performed by his colleague at the Eugenics Record Office, Morris Steggerda. Perhaps surprisingly, Booker T. Washington and other black leaders facilitated this work. Lombardo reminds us that anthropometry was no marginal pseudoscience in its day; W.E.B. DuBois had employed it in his own studies of the Physique of the African American in order to undermine negative racial stereotypes.

Paul Weindling reconsiders experimentation under the Nazi regime. Although often central to our consideration of medical ethics, Weindling points out that this topic occupies only a marginal place in holocaust studies. Although victim testimony was used in the doctors’ trials at Nuremberg and Ravensbrück, the victims were often presented as passive victims. Weindling argues that this approach has perpetuated the denial of the autonomy of the many who tried to undermine, sabotage, or disrupt these experiments. Further, Weindling’s study addresses perhaps the most fundamental question in the study of human subject research: How can one person treat another in such a manner? Weindling points out that the German medicine was driven by a culture of experimentation; aspiring physicians had to perform and publish experimental research to complete their habilitation and gain the honored title ‘Herr Doktor.’ This led many to perform self-experimentation, or to enlist their families and children as experimental subjects. The war, and the incarceration of prisoners, thus provided much-needed subjects. The requisition by the military of many hospitals in which research had formerly been pursued further pushed researchers to move their research into the growing network of camps. Significantly, not only does Weindling’s essay seek to humanize the victims, but also some of the perpetrators, an inevitable result of seeking not only to condemn, but understand. Such experiments, he argues, were never a part of a unified race-science, and a significant number of camp doctors were critical of the lethal experiments performed by some of their colleagues, even as they pursued their own programs without the consent of their subjects.

Dyck’s essay turns to the eugenic sterilization of institutionalized children at the Provincial Training School for Mental Defectives in Red Deer, Alberta. Facilitated by the 1937 Sexual Sterilization Act, which ruled that the mentally defective were incapable of consent, the Alberta eugenics program oversaw the sterilization of 2822 individuals: the most of any Canadian province. Dyck shows that although the sterilization of boys and young men operated on many of the same principles as the sterilization of girls and young women, renewed attention to hyperactivity disorders additionally made them targets for psychiatric and hormonal experiments in ways that have been overlooked by historians of medicine.
In sum, *The Uses of Human Experiment* is a collection of what individually are very interesting and useful essays that cover little-studied episodes in the history of human subject research. As a collection, however, the volume as a whole is less convincing due to the unbalanced chronology and an introductory essay that does little to draw out unifying themes or conclusions. It will strike some readers as odd that any discussion—even in the editor’s introduction—of the framing of the Nuremberg Code, the Belmont Report, or the Declaration of Helsinki is intentionally absent from this volume, and thus the reader is left to draw many of the connections not only between the essays and themes—but between the past and the present—themselves.

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