# Book

## Nazi medicine and the ethics of human research

On July 28, 2005, a moving memorial service was held at Westminster Abbey, London, UK, for the former British prime minister Lord Callaghan (Jim Callaghan) and his wife Audrey. Their son-in-law, professor Michael Adler, spoke of Callaghan's outrage at the Nazi atrocities carried out against the Jews before and during World War II. He had met, in the immediate aftermath of the war, a refugee journalist, Alfred Wiener, who had amassed a huge collection of material about Nazi anti-Semitic persecution, and argued that it needed to be stored as evidence of what had transpired. Much was used at the Nuremberg trials, and Callaghan later successfully chaired the appeal for the Wiener Library in London, to ensure it a permanent home.

However, even to this day, much evidence lies in the minds of survivors of the most barbaric medical experiments in the concentration camps. "Survivors of medical atrocities are able to confront history and point to the inadequacies of care and compensation", according to Paul Weindling in the introduction to his masterly volume, *Nazi Medicine and the Nuremberg Trials*. Although most victims were murdered in the name of perverted science, those who survive can make sure that what took place is fully recorded, as can the historians of medicine who work in this area, such as Robert J Lifton, Paul Weindling, Edward Pellegrino, and now Naomi Baumslag, with her new book, *Murderous Medicine: Nazi Doctors, Human Experimentation and Typhus*.

Baumslag explores in impressive detail how typhus was characterised by Nazis as the Jewish plague. Those who suffered from it were killed in huge numbers or isolated in unsanitary conditions, with inadequate food and medicine. In the concentration camps, typhus was allowed to flourish and prisoners were deliberately infected with the disease to test typhus vaccines.

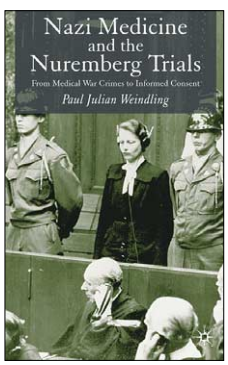
The way typhus was used to kill Jews, Slavs, and gypsies epitomises Nazi medicine's deliberate disregard of those who took part in research, classing them as subhuman. Such thinking was wholly in accordance with Nazi ideology, but in total contradiction of medical ethics. There are accounts from survivors that even suggest some doctors' positive delight in killing and maiming, and a desire to experiment on some of the victims to prepare for genocide. Weindling is particularly effective in nailing down the views of the postwar German medical establishment. He describes as a monster Eugen Haagen, who did experiments with a typhus vaccine that caused damage and frequent death to prisoners at Natzweiler concentration camp. Haagen's lack of concern for his research subjects was legendary. Yet Haagen, arrested and released by the Americans and then by the French, argued that he should have received the Nobel prize (he had developed a yellow fever vaccine before the war), and that his "guineapigs", including the hundreds transported from Auschwitz to Natzweiler for his research, served legitimate scientific ends.

> **"Despite the fact that nothing so terrible occurs now as it did in Nazi Germany, lessons still remain to be learned and inwardly digested—of seeking informed consent, telling the patient what emerges from a study, and seeing the patient as a partner in a trial, not a subject to be used."**

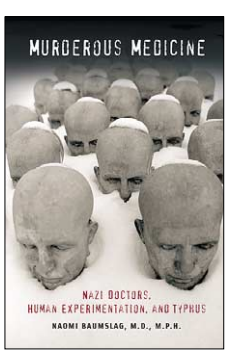
Haagen's belief that anything was legitimate if it advanced scientific knowledge was all part of his and others' blindness to their own immoral behaviour and wilful disregard for human life. The simple fact remains that doctors were easily recruited, including from the highest echelons of German academic medicine, to carry out unspeakable trials and to injure, maim, sterilise, and kill other human beings. When it came to the Nuremberg trials, physicians argued that it was not their fault, since they had received their orders from on high, and that treating them as war criminals would be disastrous for the reputation of medical research and science, especially as what they had done was in fact useful. Nor were other countries immune from morally questionable behaviour.

One telling example is that of Janet Vaughan, a haematologist who led the Medical Research Council's (MRC) team at Belsen in the immediate aftermath of the war, and whose work Weindling describes in an earlier book, *Epidemics and Genocide in Eastern Europe* (2000). The MRC wanted to experiment with Amigen, an American enzyme product, and with an "intravenous hydrolosyte". Vaughan recorded that the research terrified patients, who believed they were about to receive a fatal injection. "When we went up to our patients with a stomach tube they would curl themselves up and say 'nicht crematorium'." She soon realised that what these survivors needed was proper care and nursing. With hindsight, this is blindingly obvious. The research soon ceased, but one still cannot help wondering why the research personnel did not spend their time more humanely. Weindling notes that the camp became a sort of experimental station for nutritionists studying starvation and the US Typhus Commission, which did chemotherapeutic and clinical studies in the US liberated camps.

Meanwhile, the Allies were concerned that the Nuremberg Trials should not undermine public confidence in medical science. Lord Moran, sent by Clem Attlee to look at German




**Nazi Medicine and the Nuremberg Trials: From Medical War Crimes to Informed Consent**
Paul Julian Weindling. Palgrave, 2004. Pp 496. £60·00. ISBN 1-403-93911-X.



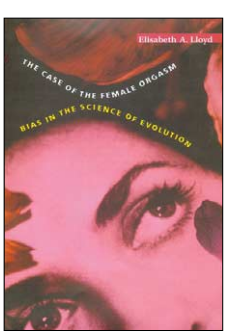

**Murderous Medicine: Nazi Doctors, Human Experimentation, and Typhus**
Naomi Baumslag. Praeger Publishers, 2005. Pp 304. $49·95. ISBN 0-275-98312-9.

human medical experiments, argued that the state, not the individual, was the main culprit of this unethical research. Kenneth Mellanby, a medical entomologist who persuaded the *British Medical Journal* to designate him as its official correspondent at Nuremberg, argued that "the victims were dead; if their sufferings could in any way add to medical knowledge and help others, surely this would be something that they themselves would have preferred" (*Human Guinea Pigs*, 1945). How could he know?

Yet scientists continued to do terrible things in the name of research, although on nothing like such a scale. In 1966, Henry Beecher, professor of anaesthesiology at Harvard, published "Ethics and Clinical Research" in *The New England Journal of Medicine,* and drew attention to 22 examples of unethical clinical research in which patients' lives had been put at risk. These trials included the Tuskegee syphilis experiments and other studies in which prisoners and those who were not free to choose or give consent were experimented upon to their detriment. Soon after Beecher's paper, Maurice Pappworth's *Human Guinea Pigs: Experimentation on Man* (1967) was published. Pappworth's contention that research which put patients at risk was not uncommon in the UK made him unpopular in medical circles; he did not get his Fellowship of the Royal College of Physicians until shortly before he died. This work by Beecher and Pappworth came out in the wake of a series of revelations about Nazi medical war crimes. But unethical trials have taken place since then.

Today, concern is expressed about research on children and those with mental illness or dementia and the extent to which they can—or should—give consent. Can advanced directives be used to allow researchers to conduct studies when the person is unable to give consent at the time it is needed? Despite the fact that nothing so terrible occurs now as it did in Nazi Germany, lessons still remain to be learned and inwardly digested—of seeking informed consent, telling the patient what emerges from a study, and seeing the patient as a partner in a trial, not a subject to be used. With all our ethical guidelines and research ethics committees, good as they are, we still have a long way to go.

*Julia Neuberger*
paolachurchill@hotmail.com




**The Case of the Female Orgasm: Bias in the Science of Evolution**
Elisabeth A Lloyd. Harvard University Press, 2005. Pp 320. $27·95. ISBN 0-674-01706-4.

# In brief

## Book Orgasm and evolution

Underlying biases exist throughout science, but surely nowhere in as extreme a form as in research into female sexuality. The assumptions in this area boil down to two: female orgasm must be "for" something, and this purpose must be linked to reproductive sex. Elisabeth Lloyd neatly dissects the history of these biases and their results in *The Case of the Female Orgasm*.

Adaptive evolutionary accounts propose that female orgasm either improves reproductive success directly (the gruesome-sounding upsuck theory of uterine contractions moving sperm more efficiently), or indirectly (by promoting pair bonding—better in bed being correlated with better father material). Lloyd prefers the theory that since the penis and clitoris arise from the same undifferentiated embryological organ, women get the erectile and nervous tissue necessary for orgasm as a by-product of the selection pressure for the male-sperm delivery system.

As she reviews and finds wanting 21 explanations for female orgasm, Lloyd uncovers fascinating biases. Some adaptationists argue that the by-product account is flawed because, well, it rules out the adaptative explanation. And her analysis of sexology literature shows that only 25% of women always orgasm with intercourse; this suggests it isn't an especially highly selected trait. Links between orgasm and reproductive success are unproven—in fact, primate research indicates that orgasm is more highly correlated with female-female sexual encounters than with mating. Lloyd could not find any studies on orgasm in lesbian sex, so I did a brief (unscientifically sound) e-mail survey. Of the ten women I asked, five had had sex with women as well as men—four of five rated the frequency of achieving orgasm as higher with women, the remaining woman rated it the same.

Aside from methodology, one of the biggest problems in sexology research is a failure to define the basics—what is meant by an orgasm? Faced with explaining why heterosexual sex just doesn't do it as well as female-female sex for macaques, researchers suggested that the macaques were just having "subtle, imperceptible" orgasms. Their evidence? Human research that showed female orgasms were common in heterosexual sex, but just much weaker than those that resulted from masturbation or direct clitoral stimulation. Call it my bias, but of all the debate on what constitutes a female orgasm—breath holding, uterine contractions, round-mouthed frowning stare (macaques, not women), clutch reaction (both)—in human studies you could start with a basic premise: if she didn't notice it, it didn't happen.

*Sarah Venis*
sarah@clubdogma.com