## Nuremberg code turns 60

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This month marks sixty years since the Nuremberg code<sup>1</sup> – the basic text of modern medical ethics - was issued. The principles in this code were articulated in the context of the Nuremberg trials in 1947. We would like to use this anniversary to examine its ability to address the ethical challenges of our time. One of these is the question of scientific misconduct downstream to medical research, particularly when biased interpretations of clinical studies lead to an overoptimistic assessment of a new drug, which ends up being withdrawn from the market after harming many individuals, as happened with rofecoxib.<sup>2</sup> A second development is one that the Nuremberg judges could hardly have foreseen. In the age of AIDS, human research ethics began to be invoked not only to offer protection from research, but also to gain access to it. The AIDS crisis turned the fact of becoming a research subject into a kind of privilege, as it carried the hope of early access to treatment. Ethics must now reconcile two antagonistic objectives: protecting research subjects from possible harm, while ensuring non-discriminatory access to research for potential subjects; a tough balancing act.

The Nuremberg code evokes a dark time for medicine, yet remains a powerful symbol in inspiring the medical profession to stand up for its Hippocratic values and protect individuals from harmful medical experiments.

For the past 60 years, a series of ethical texts and instruments have relayed the Nuremberg court's opinion,<sup>3</sup> and completed or interpreted the code in the multifaceted context of medical experimentation. The medical profession thus draws on a vast body of ethical reflection to ensure that scientific

advances do not prevail over the health and safety of individuals without their fully informed consent in medical experiments. However, we ask whether modern ethics and its binding instruments can always secure full protection to experimental subjects and beyond them, to the recipients of health care. In a context of relentless competition for resources among scientific institutions, ethical vigilance is a permanent necessity. Falsification of scientific results and the premature release of drugs on the market show that modern ethics does not in itself provide full protection against scientific misconduct, especially when it occurs beyond the critical step of malevolent or unsafe experiments involving human beings.

Bioethics experts Paul Weindling and Volker Roelcke suggest that current bioethical thinking may use an incomplete picture of the historical context of the Nuremberg code. Volker Roelcke writes: "rather than being the result of a coercive state, Nazi medicine illustrates how medical researchers and their representative bodies [...] co-operated with and even manipulated a totalitarian state and political system relying on expert opinion, in order to gain resources for the conduct of research without any moral and legal regulation." He states that Nazi doctors "followed the intrinsic logic of their scientific disciplines and used the legally and ethically unrestricted access to human beings created by the context of the political system and the conditions of war." 4 By centring exclusively on the war crimes and not on their broader context, the judges at Nuremberg issued the code in order solely to set the boundaries for "permissible experiments" and tackle the difficult question of the biomedical research conducted on human subjects outside Germany during the war. The court thus failed to produce a broader

legal doctrine protecting individuals against harm induced by scientific practices at large, including not only human beings as subjects of medical experiments but also as consumers and beneficiaries of science's outcomes.

## References

- Permissible Medical Experiments. Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No.
   Nuremberg October 1946–April 1949. Washington: U.S. Government Printing Office (n.d.), vol. 2, pp. 181-182.
- Cahana A., Mauron A. The story of Vioxx

   no pain and a lot of gain: ethical concerns regarding conduct of the pharmaceutical industry. J Anesth 2006;20:348-351.
- 3. Alexander L. Medical science under dictatorship. *NEJM* 1949;40:241.
- Roelcke V, Maio G (ed.): Twentieth Century Ethics of Human Subjects Research. Historical Perspectives on Values, Practices, and Regulations, p.162, Stuttgart, Franz Steiner Verlag, 2004.

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