



# Where do they come from? A call for complete transparency regarding the origin of human tissues in research

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**To cite:** Hildebrandt S, Seidelman WE. Where do they come from? A call for complete transparency regarding the origin of human tissues in research. *ESMO Open* 2017;**2**:e000201. doi:10.1136/esmooopen-2017-000201

Accepted 21 April 2017

At a recent conference on ‘*Medical ethics in the 70 years since the Nuremberg Code*’ in Vienna, the task of a final panel of experts was to discuss the question whether to use, or not to use, data gained from coercive medical research in National Socialist Germany.

Specific examples debated were the poison gas experiments by Professor Otto Bickenbach,<sup>1</sup> and the Pernkopf atlas of Topographical Anatomy. In both instances, it became quickly evident that the question was not so much whether to use or not to use, as indeed, both of these sets of data have been used in the past and may currently still be in use. Rather, the core question seemed to be that of transparency: the need to lay open the origin of data in any publication on human subject research, be it research on the dead or studies of the living. At this point, a member of the audience asked how journal editors dealing with a global and diverse scientific community can decisively evaluate the origin of data from human subject research submitted for publication, and how editors can ascertain that samples of human tissues stem from ethical sources.

It should be surprising that, in times of Institutional Review Boards (IRBs), multitudes of editorial guidelines for scientific journals, and a long-standing debate on the duties of journal editors,\* uncertainty on this issue still remains. However, the increasing interconnectedness of scientific research around the world may require a new debate on the

essential content and limits of common core ethical values in human research. In 1992, Marcia Angell, then Executive Editor of the *New England Journal of Medicine*, discussed the question of ethical uncertainty in her landmark paper on editorial responsibilities, and stressed the need for close editorial scrutiny even in cases of approved IRBs.<sup>2</sup> IRBs, where they exist, are not without criticism, and can under certain conditions, so Chinese bioethicist Ren-Zong Qiu, become subject to a ‘deethicalization’. By this he meant that the application for and granting of IRB approval could deteriorate to a purely ‘technical and mechanical process’ that has little resemblance with a true evaluation of research ethics.<sup>3–5</sup> More importantly, while ethical guidelines for science editors often quote the Nuremberg Code<sup>6</sup> and the Declaration of Helsinki<sup>7</sup> as basis for their reasoning, these protocols address research on living human beings and identifiable human tissues, but do not include decision strategies for investigations on tissues and data from non-identifiable and/or dead human beings.<sup>8</sup> Furthermore, in an age of global scientific exchange the spectre of ‘ethical imperialism’<sup>9 10</sup> is always looming. So, what is an editor to do?

The authors like to address current questions of medical ethics in the light of a specific history, here the data and tissues from coercive human research performed by Nazi physician-scientists. The history of anatomy in National Socialist (NS) Germany and its legacies has by now been explored to such an extent that it may serve as an illustration for the problem and its potential solution.<sup>11</sup> From 1933 to 1945, anatomists in Germany and its occupied territories used the bodies of victims of the NS regime for teaching, research and publication purposes.<sup>†</sup> During

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\*See for example, Recommendations by the International Committee of Medical Journal Editors: <http://www.icmje.org/recommendations/browse/about-the-recommendations/purpose-of-the-recommendations.html> (last accessed 3/17/17); or Council of Science Editors (CSE). CSE’s white paper on promoting integrity of scientific journal publications, 2012 update. URL: [http://cseditors.wpengine.com/wp-content/uploads/entire\\_whitepaper.pdf](http://cseditors.wpengine.com/wp-content/uploads/entire_whitepaper.pdf) (accessed 3/16/2017).

<sup>†</sup>It has to be noted here that, whereas the Jewish citizens were the primary target of the National Socialist extermination policies concerning

that time, the traditional sources of legal anatomical body procurement changed to include psychiatric patients murdered in the so-called 'euthanasia' programmes, Jewish citizens committing suicide out of desperation and an exponentially rising number of bodies from political dissidents executed following civilian and military court trials, as well as Russian and Polish slave labourers convicted and executed for trivial crimes or socialising with German women. Many anatomists lobbied for access to the bodies of executed persons, as in German anatomical tradition tissues from this source had become a 'gold standard' for high quality histological research, long before the start of the NS regime. The scientists did not question the origin of these tissues, because bodies were provided on the basis of long-standing laws, which had been modified by the NS government. The anatomists welcomed this 'opportunity', presented by the new and iniquitous NS legislation, which provided them with an abundance of a formerly rare 'material'. The number of publications based on these tissues multiplied during the war years, and some anatomists even proceeded from their traditional work with the dead to human experiments on prisoners before their death. Manuscripts explicitly naming or at least hinting at the origin of tissues from the executed were accepted by editors from a variety of journals into the postwar years, and became the basis for several standard texts in human anatomy.<sup>12 13</sup>

One of the most prominent examples of anatomical scholarship resulting from the use of bodies of NS victims was an atlas of topographical anatomy authored by the Nazi Eduard Pernkopf.<sup>14 15</sup> Although the atlas contained features such as Swastikas that clearly indicated its questionable origin, surgeons around the world used it for decades after the war because of its great accuracy. Editions of the atlas were published in five languages: German, English, Spanish, Japanese and Italian. Only in the late 1990s did ethical concerns lead to a public debate on the origin of the atlas, and the publisher decided to end the book's production. However, the use of the atlas never really stopped. Untold numbers of the book, probably tens of thousands, remain in personal collections, with old copies and digital versions readily available for those interested in them. Some of the Pernkopf paintings were reproduced in other atlases such as the one edited by Carmine Clemente. Similarly, data from other NS anatomical research have long since found entrance into the general fundus of medical knowledge. The NS

anatomists were never officially called out on their excessive use of bodies of the executed, as the truth about their work was not openly discussed in a postwar atmosphere of secrecy, silence and denial of their potential involvement in coercive research practices. The unwillingness to probe the past was defended then, as it is often now concerning tissues from the dead, with the ethical ambiguity of the dead human body and the argument that 'legal' sources were also 'ethical' ones. One can only speculate what might have happened, if German anatomists had started discussing their own history in an open and productive fashion in the first decades after the war, instead of 60 years later. Could they have facilitated an earlier and wider conversation on ethics in anatomy? Indeed, the anatomical use of tissues from executed persons continues on a global scale into the present, even as many countries, including Germany, have banned capital punishment on the basis of human rights.<sup>16</sup>

In recent years, this history, among other considerations, has led to intense discussions on ethics in anatomical research and the use of human tissues, including editorial responsibility. Of course, here too, laws, guidelines and recommendations of best practices for work with human tissues exist or are currently being proposed.<sup>17-19</sup> However, any new protocols are necessarily limited to a specific nation, culture and ethical framework. Even within one geographical region, practices and ethical convictions can be controversial,<sup>20</sup> if they are visible at all in times when secrecy about the origin of tissues still prevails in many parts of the world. Ideally, the provisions of the Declaration of Helsinki should apply to all research on human tissue, too, but this is not yet the case. And unilateral demands for the fulfilment of certain criteria, such as the origin of tissues in anatomical research from 'free voluntary consent for body donation', could lead to the exclusion from publication for those researchers in the worldwide scientific community, who do not have access to such tissues. Furthermore, populations that historically never had a voice in the global discussion are currently developing new codes of medical ethics that need to be taken into consideration.<sup>21 22</sup> Given this fluid situation it is proposed here that, independent of the relevant cultural and institutional regulatory framework of an individual study submitted for publication, at the very minimum, all editors of scientific journals should be able to expect complete transparency concerning the origin of the tissues and data used in human subject research. Independent of and in addition to IRBs, the authors should provide a detailed explanation about the research subjects, dead or living, from whom the tissues and data derive. Researchers should be asked to answer questions on informed voluntary consent, and, apart from a physical description of the subjects, also provide data on their social and cultural circumstances, for the identification of vulnerable populations. Researchers may not always be able to deliver this information, but editors should be allowed to ask the questions.

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so-called 'enemies' of the German state, within the context of anatomical research they are one group among several others. In the case of the Institute of Anatomy of the University of Vienna between 1938 and 1945, the university investigation documented that of 1377 cadavers of executed victims delivered from the Regional Court or the Gestapo, 8 of the subjects were determined to be Jews. The religious and cultural importance of potential physical remains of any Jewish victims of the Holocaust is acknowledged here and will need to be addressed in further deliberations of the questions addressed here.

Once such a practice of full transparency is established, a discussion on common ethical rules on human tissues and data derived from them should be started that may then lead to a consensus within the global scientific community. At the very least, an open dialogue could contribute to the raising of awareness on the ethics of the origins of tissues and data. Such a discussion should also highlight the need for each scientific journal to develop its own 'ethical domain' of quality standards in the research its editors can accept. After all, it is possible, as the anatomist Andreas Winkelmann puts it, that research is 'carefully designed, methodologically correct, unbiased and well-reported, but deeply flawed from an ethical point of view [...] and] history has proven that this is not merely a theoretical possibility'.<sup>8</sup>

Whatever else we, as a global research community, may decide and believe in terms of the ethicality of the origins of human tissues and data in research: we need to start with transparency and seek an open conversation in order to move forward on this issue. Individual editors may then choose to follow their own journal's specific rules, but will know the implications of their decisions for the rest of the world.

**Acknowledgements** The authors are grateful to Dr Florian Schmaltz and Professor Dr Volker Roelcke for their critical reading of the text.

**Competing interests** None declared.

**Provenance and peer review** Commissioned; internally peer reviewed.

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