reviews

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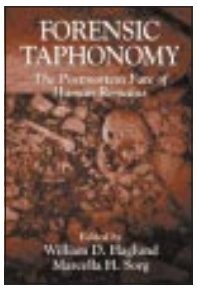
Forensic Taphonomy: The Postmortem Fate of Human Remains

Ed William D Haglund, Marcella H Sorg



CRC Press, £72, pp 636
ISBN 0 849 39434 1

Rating: ★★★

On 5 March 1940 Stalin gave the order for the NKVD to execute prisoners of war captured during the combined German and Soviet occupation of Poland. In 1943, 4500 victims were discovered in mass graves in the Katyn Forrest, after the Germans had overrun Soviet territory. The Polish government in exile demanded a commission to investigate, and an international team of forensic investigators under German authority examined the victims. This investigation placed the blame on the Soviet regime. Stalin dismissed this as propaganda. A Soviet investigation the next year blamed the Nazis and the Soviet regime tried (unsuccessfully) to include the Katyn massacres on the Nuremberg indictments. Only 50 years later did the Soviets admit responsibility.

Katyn was an early example of the use of forensic science to investigate war crimes, and of its misuse as propaganda. In the year that Stalin murdered the Polish soldiers, the Russian scientist and fantasist Efremov coined the term taphonomy (from the Greek taphos for "grave") to describe death assemblages in the fossil records. The term taphonomy is now used to describe the postmortem fate of biological remains. Forensic taphonomy is the application of such processes to assist legal investigations.

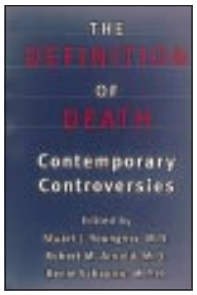
Traditionally, the examination of human remains in suspicious circumstances has rested with forensic pathologists, but scientists with knowledge to assist in the recovery of evidence from such cases have an important role. Forensic anthropologists study the skeleton to distinguish injuries from the effects of the environment, postmortem human activity, or animal interference. Forensic archaeologists apply knowledge of the recovery of buried remains to how the victims were placed in the ground. Forensic entomologists apply knowledge of insect succession to the timing of death and may be able to say whether bodies have been disturbed. Ballistic experts can position gunmen at a massacre by the distribution of cartridge shells and identify how many were present.

This book contains much information about taphonomic processes and the investigation of crime. The book details decomposition processes, animal and insect activity, and environmental changes. Case studies vary from an investigation of the killing of Kurds in Iraq during Saddam Hussein's Anfal campaign to the investigation of historic Inuit skeletons showing postmortem interference by polar bears. All these forensic disciplines have combined to investigate events from single victim homicides to war crimes involving thousands of victims. An increasingly important role has been in the investigation of war crimes in such places as the former Yugoslavia and Rwanda. After Katyn, as Norman Davies quotes in his excellent book on Europe, "those who chose to tell the truth stood to be dismissed as unscientific." But the truth will out, murder cannot be hid for long.

C M Milroy *senior lecturer in forensic pathology, University of Sheffield*

The Definition of Death: Contemporary Controversies

Eds Stuart J Youngner, Robert M Arnold, Renie Schapiro



Johns Hopkins University Press, £45, pp 368
ISBN 0 8018 5985 9

Rating: Rating: ★★★★

This is an excellent book. The editors have managed to put together contributions from some of the most influential thinkers in biomedical ethics in the United States, and some experts from other countries, making for an engaging and fascinating collection of short articles. For readers unversed in the depth of the debate, some articles may initially seem somewhat difficult, but, by reading the book through, even the less well informed will soon grasp the nature of the debate that has engaged some of these scholars for a considerable time.

The book looks at various aspects of this most vexing subject, including the historical and clinical framework, the interface between the philosophical and the clinical, regulation of and public attitudes to the definition of death, international perspectives, and public policy. It concludes with a consideration of the future.

Much of the book concentrates on the definition of death itself. Should the definition used be that adopted in some US states—namely, the death of the whole brain—or are other tests adequate to countenance acceptance that death has occurred (or, at least, that the process is irrevocably established)? The answer to these questions will, of course, inform both treatment decisions and the use to which the "deceased" body may be put (such as in organ transplantation programmes). There are no simple answers, and this book exposes the extent to which the debate is truly complex by demonstrating the critical differences of opinion between experts.

Admittedly, reading the book requires concentration and a certain amount of knowledge about the ethical and clinical debate, but perseverance is rewarded. If the book is occasionally hard to read, it is not because the writing is anything other than clear, but rather because the ideas themselves are so subtle and complicated. That experts disagree may be discomfiting, but it is also somehow reassuring. This book cautions both implicitly and explicitly against complacency and alerts readers to the immense ethical and clinical concerns about the meaning of death, its definition, and its determination.

Sheila McLean *director, Institute of Law and Ethics in Medicine, University of Glasgow*

Reviews are rated on a 4 star scale (4=excellent)

PERSONAL VIEW

Time flies ....

To what extent are doctors agents of the state and does it matter? At a recent meeting organised by the Human Values and Health Care Forum, Professor Michael Burleigh presented historical data on the role of doctors—mainly psychiatrists and paediatricians—in the execution of the so called euthanasia policy, pursued and legalised in Nazi Germany in 1933. A contemporary account of the complexities of doctors' involvement in state business was provided by a forensic psychiatrist who explored the ways that doctors are involved—with varying degrees of intimacy—in the punishment of those who offend against the state.

Burleigh's paper contained material both fascinating and awful. It is clear from his research that most doctors were not coerced into murdering their patients, but rather volunteered for a course of action with which they were in political sympathy. Such behaviour is a nice example of distinction between the doctor as a medical scientist, and the doctor as a citizen, or, perhaps more clearly, as a political animal. Clearly people can be citizens, or political agitators, and can also be doctors. Their political and professional identities coexist; there are several such sitting in parliament. Equally, however, it must be possible for people to become doctors, and then use that medical knowledge or technical experience in the furtherance of political ends—that is, the clinical identity is used for the purposes of the political identity.

Burleigh's research makes plain the potential negative consequences of this confusion of identities. Doctors who were Nazi party members—45% of the medical population at one time—used their knowledge and clinical power to carry out Nazi policy. Doctors have cherished eugenicist beliefs on a variety of grounds, ranging from the religious to the quasiclinical, much like today. Such beliefs could be subsumed under the rubric of "clinical activity" to make it morally possible to act as a doctor while also serving political views.

Of course, this situation does not apply only to eugenics. Other political arenas in which doctors or citizens may hold strong views include policies about immigration and ethnicity, and the use of torture to control dissidents. Doctors have been active in the promotion of apartheid in South Africa; they participate in torture; and may be involved to a greater or lesser degree in judicial executions. In these situations, the political identity clashes with the professional one and seems to supersede it.

BARNABY'S PICTURE LIBRARY

At one time 45% of German doctors were members of the Nazi party

One response from doctors is often to say "Let's separate our identities completely. One's political identity is discrete from, and irrelevant to, one's identity as a doctor." This separation is particularly acute given the positive moral identity often attributed to doctors; you must be virtuous because you're a doctor. There are very few physicians who are depicted in the popular media as morally flawed. Even if they can be gruff, irritable, or even traumatised, they are still basically good guys.

And sometimes, there are good guys in medicine. It may even be that doctors are more often good guys when they elide their two identities for good purposes. Dr Aneez Esmail and Dr Sam Everington have used their medical identities and experience to expose racism in medicine in several articles (*BMJ* 1997;314:1619; *BMJ* 1998;316:193-5); painful as their findings have been to acknowledge, theirs is valuable work for which we should all be grateful. The name of Albert Schweitzer used to be a byword for someone who used medicine and medical practice to improve the general health of disadvantaged people. Individuals' political agendas can take medicine forward, not just backward: can illuminate and develop the professional identity.

So it seems unlikely that we could, or should, separate out doctors' political identities from their professional ones. Perhaps the key issue is to know which hat one is wearing, at any one time, and be able to be upfront about it. Danger seems to lie in those situations where political and ethical agendas are hidden under the guise of clinical material; and then separated or excluded from the public domain. We also have to think seriously about who we train as doctors. Should we contemplate excluding some types of people from being doctors; from working with the vulnerable? Civil service post applicants often undergo rigorous psychological testing. Are there medical graduates who, although technically highly competent and even scientifically brilliant, should be identified and excluded from ever being with patients, because of their beliefs about other people?

> Should we contemplate excluding some types of people from being doctors?

Although 60 years may seem a long time ago, not much historical time separates us from our counterparts who worked in Nazi Germany. I wonder if time went by quickly or slowly for the doctors and nurses who actively participated in killing their patients. Even if the present is very different from the past, as Burleigh is keen to emphasise, it cannot be assumed that those doctors and nurses were completely different from doctors today. Evil is not in the past, it is a state of mind that anyone can enter. External vigilance and professional self reflection are important safeguards for the future.

Gwen Adshead *consultant psychiatrist, Berkshire*

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Lest we forgive

As the century ends, the proliferation in medical literature has made it increasingly easy to become lazy about the quality and source of any data with which we are presented. This struck home as I was browsing through a CD Rom textbook (*Neurobase,* Arbor Inc, 1999). While skimming through theories on the aetiology of multiple sclerosis, my mind's wandering was interrupted by a feeling of unease. I returned to the end of the preceding paragraph:

"Humans injected with multiple sclerosis brain extracts are not at an increased risk of multiple sclerosis."

This was an arresting sentence: injection with diseased brain extract? Who could have carried out such a study? Could anyone have given informed consent? The study author was named as Dr Schaltenbrand, and my suspicions about the nature of the work increased when the German title of the book, published in Leipzig in 1943, was translated as "Human multiple sclerosis and the transmissibility of simian demyelinating diseases." My first thought was to contact the American author to warn him that he may have unwittingly cited an unethical piece of research.

A few days later I got a reply to my email, the weary tone of which astonished me. I could almost imagine the sender sighing as she typed that the chapter's author was "well aware" of the controversy surrounding Dr Schaltenbrand's work. She added that "in the light of the concerns raised" (the implication being that I was unreasonably sensitive), Schaltenbrand's work would be referred to indirectly as part of an article by M I Shevell and B K Evans in *Neurology* (1994;44:350-6), which discussed the contemporary use of Schaltenbrand's data.

The editor in chief of the CD Rom was more concerned. In his reply he admitted that he had been disappointed and surprised at the inclusion of such studies in the textbook. Kindly, he sent further literature detailing the flawed horror of Schaltenbrandt's experiments. This made instructive, if harrowing, reading. Schaltenbrand felt that the risks of this study, though low, were such that he could use only "verblodete menschen" (literally "demented individuals"). In all, 45 patients were subjected to intracisternal and intravenous injection of cerebrospinal fluid or serum taken from humans or monkeys. At least one of the subjects was a child with learning difficulties. Tellingly, the details presented in his writings are incomplete, and the results necessarily inconclusive. No useful implications can be drawn from the presented data.

I was appalled. It was bad enough that such studies were ever done, but dangerous and intolerable that they should be so nonchalantly—and knowingly—quoted a mere five decades later by a world authority. Even if we laid aside the moral qualms (which I find difficult), how can the scientific merit of such work be judged when ethical considerations have been so blatantly ignored? Verifiable scientific research demands a balance between care for the study subjects and detachment from the data. Not only are Schaltenbrand's studies unrepeatable, but we cannot tell how much of his data interpretation was subject to the same bias. Any ethical flaws may not have been highlighted by the process of peer review. As detailed by E Ernst in the *Journal of the Royal Society of Medicine* (1994;87:246), many institutions had their members of the medical faculties replaced by politically acceptable appointees. In Nazi Germany, the referees may have been as tainted by Nazi association as the authors themselves, and for any doctor or scientist to ignore such considerations is lamentably indefensible.

> We all have a duty to avoid recognising any work that is less than ethically rigorous

Some mythology surrounds some of the experiments: that despite their barbaric nature, they hold enough potential for significant benefit to justify publication and continual recognition. Notably, however, 50 years after the Nuremberg trials, no medical experiments from that era have been universally accepted as having adequate scientific merit to justify contemporary citation. It seems that flawed researchers are inevitably drawn to produce flawed research.

As we enter the next millennium, medical literature continues to grow almost exponentially. Despite this it remains our duty to avoid recognising any work that is less than ethically rigorous. Despite receiving subsequent assurances that such data will never be cited again in the CD Rom, I am proud that my anger about the article has not abated: forgetting the origins of such studies affords the researchers a degree of respect which they simply do not merit. The scientific caution with which we should treat immoral data has rendered all such experiments useless, and "pragmatism" about the data cannot ignore the frailty of the science that it used.

As events in the Balkans should remind us, man's inhumanity to man did not end 50 years ago. While it is necessary to keep a cynical eye on current medical research, we must remain equally vigilant in withholding any form of approval from the inexcusable immoralities of yesteryear. In this instance, forgetting is uncomfortably close to forgiving.

John Paul Leach *senior registrar in neurology and neurophysiology, Liverpool*

SOUNDINGS

The laws of thermodynamics

I was sitting on the end of the old man's bed listening to stories of his life. I was a medical student at the time. The odd thing, he had said, was that the world made no more sense to him then than it had when he was a boy. He had thought that things would become clearer with age. I remember the perplexity in his watery eyes. Somehow, time had crept up on him before he had sorted things out, before he fully understood what it was all about.

Not long after our talk he arrested, and I watched, mute, as the crash team tried unsuccessfully to resuscitate him. I considered his enigmatic comments as I watched his viscera being examined in the mortuary. But I gave the matter little more thought because I was a young man in a hurry, more concerned with the relationships of the lateral cutaneous nerve of the thigh than with arcane questions of purpose.

In those days patients were distant, frail creatures, far removed from the confident certainty of my own youth. They passed through the wards like shoals of herring, making their presence felt only occasionally by some comment that would flare briefly on the ward round, reminding us of our mutual humanity. But mostly they were cases: mitral stenosis, a third nerve palsy, and we pursued their physical signs like vultures, perched on the end of their beds with our stethoscopes.

And then gradually through time, like some animated Kaplan Meier survival graph, your family, friends, and colleagues slipped off the 100% line, and became part of the shoal. Suddenly the blue, panting old woman in the corner of the ward, with cor pulmonale and the loud second heart sound, is your mother. The man in intensive care with the subarachnoid is your colleague and friend. And the fretful, uncertain parent is you. Uncertain because you are no longer sure that fate will always deal you the best hand in the way that it did when you were immortal.

Before I did medicine I did a degree in physics. I think that medical students should learn more physics. The three laws of thermodynamics are particularly important:

You can't win.

You can't break even.

And you can't even get out of the race.

Kevin Barraclough *general practitioner, Painswick, Gloucestershire*