

health and hygiene, more perhaps could have been said on how the presence of religious minorities and the different national religious contexts across the Kingdom of Yugoslavia effected the development of public health. Also, following the two Romanian chapters, one may ask, how did Manliu and Facaoaru, who argued for Romanian racial improvement through negative eugenics, view Csallner's Transylvanian Saxon movement, a pro-natalist German minority? It would seem that a comparative study could prove an interesting discourse within Romanian historiography.

Minor criticisms aside, this is a superb collection. It is to be hoped that the participants now move towards acknowledging each other as part of a larger dialogue on the 'culture of health' in southeastern Europe. Such incisive and intriguing contributions to this field suggest that there are exciting times ahead for the history of this fascinating region.

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**Christine Wolters**, *Tuberkulose und Menschenversuche im Nationalsozialismus. Das Netzwerk hinter den Tbc-Experimenten im Konzentrationslager Sachsenhausen* [Tuberculosis and Human Experimentation in National Socialism. The Network behind the Experiments on Tuberculosis in the Sachsenhausen Concentration Camp] (Stuttgart: Steiner Verlag, 2011), pp. 287, €49.00, hardback, ISBN: 9783515093996.

Medicine under National Socialism – there is barely a single field in the history of medicine that has been more intensively researched in recent years. However, the conjecture that no more new insights can be expected in this area is unfounded. With respect to criminal experimentation on humans in concentration camps, an astonishing number of questions remain unanswered, particularly in the field of victim research. The research project 'Victims of Human Experiments and Coercive Research under National Socialism', led by Paul Weindling, is only now shining some light in this field: not even the exact number of victims of Nazi human experiments has been known until now, let alone their narratives.

Due to the sources, the study by Christine Wolters on the tuberculosis experiments in Sachsenhausen concentration camp is able to only partly include the victims' perspective. However, it does show that, even in perpetrator research, new insights are by all means possible. From the scope of the completed source analyses alone, the work by far exceeds the usual framework of medical history dissertations which, while going into great detail and taking various aspects into consideration, are moreover highly contextualised.

The main objective of the author is to combine the topic areas tuberculosis research and human experiments. Here she justifiably takes as a starting point the argument that human experiments in concentration camps should be analysed against the backdrop of contemporary research, and are by no means to be dismissed at the outset as 'pseudoscientific'. The author first outlines the development of tuberculosis research and control in Germany. From Robert Koch's unsuccessful attempt to establish 'tuberculin' as a therapeutic agent, up to the evidence for the effectiveness of Conteben, Streptomycin and para-aminosalicylic acid, she starts by tracing the research on effective measures against tuberculosis. She not only details the search for medication, but also addresses the BCG vaccination, developed in 1921, which, however, was viewed with scepticism in Germany,

particularly after the Lübeck vaccination disaster in 1930. The portrayal of vaccination attempts on children in psychiatry during National Socialism represents a link to the topic of human experiments in concentration camps.

Social hygiene, eugenics and the study of the constitution in connection with tuberculosis research are outlined in further sections. Against this backdrop, the quickly radicalising practical measures for combatting tuberculosis are comprehensible, from forced placement in medical care units to the murder of sick tuberculosis patients under National Socialism.

The chapter at the centre of the book about the experiments in Sachsenhausen first pursues the question of how the experiments by the SS under Heinrich Himmler were organised from outside of the camp. Here a network of agents comes to light, which subsequently includes the Dutch Zahn brothers – at first glance quite untypical initiators of human experiments. In particular, the fact that the doctor, Gualtherus Zahn, in no way fitted the usual picture of an SS doctor, that he was a Dutchman and that he was in Sachsenhausen on non-military business make the in-depth study especially interesting.

The colourful life stories of Gualtherus (born 1891) and Herman Zahn (born 1883) have so far not been investigated. The credit belongs to the author for not only carrying out meticulous research in various Dutch archives, but also making contact with the Zahn family and conducting interviews. The life stories of the brothers, portrayed as ‘interconnected’, appear adventurous, and their reconstruction occupies the largest amount of space among the research for the entire study.

Hermann Zahn was initially an officer in the merchant navy, but left because of a sight defect and subsequently attempted diverse economic endeavours with little success. On numerous journeys within Asia he claimed to be a doctor. As early as 1937 he allegedly possessed a ‘secret remedy for tuberculosis’. His brother, Gualtherus, also travelled a great deal, including to China, but in 1933, at 42 years of age, he began a degree in medicine in Geneva, which he completed in 1940. In 1936 he joined the Dutch National Socialist movement. After his studies, the 49-year-old went to Germany and started working at the Rudolf-Hess hospital in Dresden. He consequently focused on naturopathic remedies and turned to ‘new German medicine’. At this Dresden ‘central biological hospital’ he became acquainted with Heinrich Himmler’s masseur, Felix Kersten, who would ultimately pave the way for him and his brother to meet Himmler and to try out the ‘secret remedy’ (an inhalant that contained highly potent expectorants such as camphor and menthol). In the spring of 1941 the tuberculosis experiments by Gualtherus and Hermann Zahn began in Barack IV of the ‘infirmiry’ at Sachsenhausen.

The context for the on-site research is outlined in detail: not only the complex allocation of different functions and responsibilities in the ‘infirmiry’, but also the conducting of the experiments and the culmination of the naturopathic experiments of the Zahn brothers are extensively elaborated. For the sake of comparison, the experiments were performed on a ‘second group’ of test subjects, who were treated with conventional medicine. The concentration camp doctor, Heinrich Baumkötter, was responsible for these. He claimed that the mortality rate was equally high in both groups, and it was purportedly his evaluation of Zahn as a ‘quack’ that expedited the termination of the Zahn brothers’ experiments. In any case, the ‘naturopathic’ remedy was clearly by no means harmless for the test subjects. An interconnection with company history under National Socialism is exemplarily demonstrated by the story of the production of the ‘Zahn inhalant’ in the German town of Bückeburg. At the end of the chapter there is a short description

of ‘parallel experiments’ in Buchenwald and Dachau, which serve as a comparison to Sachsenhausen.

The concluding chapter, ‘Human experiments and testing of medication in National Socialism’, places the previous accounts within the context of contemporary discourse in the field of medical ethics. It was only in 1931 that guidelines for ‘modern treatments’ and ‘scientific experiments on humans’, which were in theory to be viewed as binding, were publically enacted by the Ministry of Health of the Third Reich. However, on the basis of the present study, the fact that they evidently were not heeded under National Socialism is again demonstrated by a glance at the research practice in the concentration camp Sachsenhausen, which lacked all ethical boundaries. The exact reconstruction of the processes surrounding the ‘Zahn inhalant’ nevertheless also reveals that non-conventional medical experiments of this kind could have advanced the perception of the alleged pseudo-science of the concentration camp research.

The replica of the document from 1931 in the appendix and the impressive bibliography of sources and literature round off the book, as do several selected illustrations and a name index, which could prove useful for further research.

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**Faith Wallis** (ed.), *Medieval Medicine: A Reader*, Readings in Medieval Civilizations and Cultures, XV (Toronto: Toronto University Press, 2010), pp. 563, \$44.95, paperback, ISBN: 9781442601031.

This rich textbook of sources relating to the history of medieval medicine makes a much-needed contribution to this field of study. While Faith Wallis co-edited *Medieval Science, Technology, and Medicine: An Encyclopedia*, published in 2005, no recent synthesis specifically dedicated to the themes, sources and key figures in medieval medicine existed until the publication of the work under review here.<sup>1</sup> Although this book is aimed mainly at undergraduate students and their teachers, providing sources in English translation with explanatory commentaries and a glossary, it is also of great value to advanced scholars seeking to contextualise their research, and of interest to the broader public. Together, the commentaries tell the story of medieval medicine, providing an engaging narrative that enables the reader to develop an increasingly elaborate and nuanced picture of medicine and society in this period.

The three sections of the book, which address, respectively, the mainly practical approach to medicine in the early Middle Ages, the impact of scholarly medicine in the central and later Middle Ages, and medicine’s broader social context in the central and late medieval periods, demonstrate the breadth, variety and complexity of medieval medicine. Wallis pinpoints the period 1050–1250 as a key era of change, when *medicina*, as a ‘practical art’, came to be distinguished from *physica*, ‘a type of book-learning about medicine that was imported from the Arab world, though its roots were in ancient

<sup>1</sup> Thomas F. Glick, Steven J. Livesey and Faith Wallis (eds), *Medieval Science, Technology, and Medicine: An Encyclopedia* (New York: Routledge, 2005).