

Supplementary material

Supplementary Material 10 - About postmortem investigations at Munich and affiliated institutions such as Schönbrunn, around 1936 and in the times before and during the rise of the German Nazi regime.

Johann Knott's death raises important questions that shall not be ignored in the context of this contribution. We agree with Zeidman, that knowledge about the provenience of specimens is a general desideratum [60], and with Peiffer, that "...every scientist today has the ethical duty and moral obligation to refuse examinations of all materials which may have or have been obtained by unethical means" [32], and with Czech, that any use of such specimens and data derived from them is unethical [5]. We are aware that in the past after World War II researchers retrieved archived material without questioning the origin of the brain specimen or even with knowledge about their problematic unethical origin [60]. Concerning our study, both Schönbrunn - where J. Knott lived and died - as well as Munich neuropathology (i.e. the "German Research Institute for Psychiatry") were places involved in "Third Reich"- crimes [18]. Knott died in 1936 in the Schönbrunn asylum in Dachau next to Munich. Mentally disabled and psychiatric patients were stigmatized as "inferior" in the "Third Reich", and the NS-regime decided for precluding them from having offsprings by sterilization, and for killing them from 1939 on by so-called "euthanasia" [13,61]. After such killings, several of the victim's brains were used within unethical neuropathological research, and this also happened during the NS-regime at the Munich Institute, where the microscopic slides of Johann Knott's brain were produced. Therefore, it was an urgent need to us to clarify, whether Knott might have been victim of the NS-regime.

No clues are evident that Johann Knott's death and postmortal investigation in any concrete way was related to Nazi killings known as "euthanasia": Knott's death happened as early as 1936, when systematic killing of children by the Nazi-regime had not been started yet. One very early report about a child's "euthanasia", eventually regarded to represent the first one (discussed as "child K.", "the child Knauer" or "the Gerhard Kretzschmar case"), possibly dates from 1938 [7]. The horrific Nazi actions of targeted killing of patients including children, known under the heading "T4" and "childrens euthanasia", as well as establishing systematic registrations and special killing institutions, started from 1939 on [61]. Many research activities during the last years, enforced also by Munich University and the Max-Planck-Society themselves, happened and continue to be carried out, elucidating and commemorating those patients and their individual fates [59]. This encompasses specific research on activities in and around Munich institutions, including Eglfing and Schönbrunn (e.g. [17], [18]). In 1932, more than 1000 patients were cared for at Schönbrunn [17]. The Schönbrunn asylum participated in systematic NS-actions: from 1940 on patients were transferred to Eglfing-Haar. In total, more than 500 human beings from Schönbrunn, adults as well as children, became victim to deportation and euthanasia. Johann Knott was not among them.

Starting from 1939 on, but not earlier, the "scientific" exploitation began using brains from euthanasia-victims [61]. Obviously, Nazi delinquents based their actions on use of existing structures and cooperations for their purposes; in that way, some early continuity exists concerning places and people, whereas the aims and implications of autopsies changed later on, more and more following eugenic ideology [61], including targeted killing of persons, just in order to do "research" on their brains. It is also clear, that eugenic ideas developed and became stronger long before 1933 in the German society and science as well as in Europe ([13], [61]). The dissection laboratory at Eglfing, responsible for Johann Knotts autopsy, had been run since 1926. Up to 1935/1936 it was led by Karl Neubürger (1890-1972), working in close cooperation with Walter Spielmeier (1879-1935) leading the Munich neuropathology at Kraepelin's famous institute. These two researchers early on promoted the expansion of postmortem investigations from psychiatric institutions to include patients dying in peripheral asylums such as Schönbrunn.

The predominance of actions following Nazi ideology increased strongly when Hans Schleussing took over the lead of the dissection laboratory in November 1936, which is recognizable in strikingly increasing numbers of deaths and postmortem investigations in Munich afterwards [18]. Neubürger, himself from a Jewish family, was forced to quit before in November 1935 [17] and emigrated to the USA in 1938. Somewhat earlier, in February 1935, Spielmeyer - a clear Nazi opponent - had unexpectedly died, which also meant that Nazi supporters could take over in the period to follow [18].

Postmortem investigations at Munich at the time of Knott's death and before, especially under the responsibility of Spielmeyer and Neubürger, don't appear suspicious of being guided by unethical reasoning when aiming for clarifying the biologic basis of diseases including congenital disorders like "amaurotic idiocy".